



Nereididae (Annelida: Phyllodocida) of Lizard Island, Great Barrier Reef, Australia

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Abstract

Nereididae is one of the most ubiquitous of polychaete families, yet knowledge of their diversity in the northern Great Barrier Reef is poor; few species have been previously reported from any of the atolls or islands including Lizard Island. In this study, the diversity of the family from Lizard Island and surrounding reefs is documented based on museum collections derived from surveys conducted mostly over the last seven years. The Lizard Island nereidid fauna was found to be represented by 14 genera and 38 species/species groups, including 11 putative new species. Twelve species are newly reported from Lizard Island; four of these are also first records for Australia. For each genus and species, diagnoses and/or taxonomic remarks are provided in addition to notes on their habitat on Lizard Island, and general distribution; the existence of tissue samples tied to vouchered museum specimens is indicated. Fluorescence photography is used to help distinguish closely similar species of *Nereis* and *Platynereis*. A key is provided to facilitate identification and encourage further taxonomic, molecular and ecological studies on the group.

Key words: Polychaeta, polychaete, ragworm, paddleworm, taxonomy, biodiversity, key

Introduction

Nereididae (Annelida: Phyllodocida) of Lizard Island has, by and large, not been documented previously. The only previous taxonomic studies dealing with the family at Lizard Island are those of Ben-Eliahu *et al.* (1984) who described one new species, *Ceratonereis lizardensis* (now *Simplisetia*), and Glasby *et al.* (2013) who described three new species, *Nereis lizardensis* and *Perinereis pictilis*, *Pseudonereis anomalopsis*. The numerous ecological studies involving polychaetes on Lizard Island have mostly dealt with groups that bore into coral (bioeroders) (e.g., Hutchings *et al.* 1992) and therefore have largely excluded the family, which are not an important component of this fauna. More generally, faunistic studies of Nereididae from the Great Barrier Reef are equally scarce, with the only significant taxonomic accounts being Augener (1922) who described four species from Cape York including a new species, *Nereis* (*Perinereis*) *yorkensis* Augener, 1922 (now *Perinereis nigropunctata*), and Monro (1931) who described eight species from the Low Isles, northern Great Barrier Reef. Hutchings & Howitt (1988) reported 16 unidentified, reproductively mature, species of Nereididae from Lizard Island, which represented the largest component of the swarming polychaete fauna. The subfamily and generic-level reviews of Glasby (1999), Hutchings & Reid (1991), Hutchings, Reid & Wilson (1991) and Paxton (1983) have also included specimens from Lizard Island.

The aim of this paper is to document the diversity of Nereididae of Lizard Island and surrounding reefs based on recent museum collections. The museum collections studied have been derived mainly from four surveys over the last seven years: CReefs surveys of 2008 (April), 2009 (February) and 2010 (August–September) (<http://www.aims.gov.au/creefs/field-program.html>), and the Lizard Island Polychaete Workshop (August 2013). In all cases the family was targeted specifically. Considering the range of annual and monthly sampling events, the targeted collecting effort and the range of habitats sampled, the list of species presented in this study probably represents a reasonable approximation of the total Nereididae diversity of the island. As such, a key is also presented to facilitate identification of the Lizard Island nereidid fauna and therefore facilitate future systematic and ecological studies of the group.

Material and methods

Most of the specimens examined in this study were collected at Lizard Island; comparative material was sourced from other Great Barrier Reef localities and the wider Indo-west Pacific. Specimens were either fixed in 10% formalin solution and later transferred to 70% ethanol, or placed directly into 95% ethanol. Preserved specimens were examined using stereo (Nikon SMZ 1500) and compound (Nikon Eclipse 80i) light microscopes. Macrophotographs of preserved animals were captured with a QImaging Micropublisher 5 RTV camera mounted onto the Nikon SMZ 1500, and those of living specimens were captured with a Canon G10 mounted onto a dissecting microscope, or a Canon 5D Mark II DSLR with either a Canon MPE-65 Macro or Canon 100mm f2.8L II USM Macro, with two Inon Z-240 strobes (DSLR equipment used in the field by A. Semenov). A few specimens were imaged using fluorescence photography under a Zeiss Discovery V8 Stereomicroscope, with an AxioCam Erc5s digital camera, using NightSea Stereomicroscope Fluorescence Adapters, with a Green (510–540nm) excitation light and DsRed fluorophore barrier filter; this technique identified unique fluorescence patterns and enabled closely similar species to be distinguished in the field. The size of all specimens photographed was estimated using body width at chaetiger 10, including parapodia but not dorsal cirri or chaetae.

The material in the present study has been deposited in the Australian Museum (AM), Sydney and the Museum and Art Gallery of the Northern Territory (NTM). Many specimens were either tissue sampled from live specimens in the field for DNA sequencing, or because they were preserved in 95% ethanol, are suitable for subsequent tissue sampling. This is indicated in the Material examined section with a T suffix. Collection details for each lot examined are either listed in full (NTM specimens) or in part (MI QLD specimens) in the Material examined; the full collection data for MI QLD specimens is presented in Ribas & Hutchings (2015, *Zootaxa* 4019). Comparative material was sourced from the former Zoological Museum Amsterdam (ZMA) and Naturalis, Leiden (RMNH); these two collections have now been amalgamated into one.

Potential new species are flagged and identified using informal names; formal descriptions will follow in subsequent revisionary taxonomic papers. The informal species epithet takes the general format ‘colloquial name_voucher_name of person recognising the species’, for example, *Ceratonereis* ‘multistripe_AM W.47563’ Glasby. Uncertain identifications are indicated with a cf., and are an indication of insufficient information on morphological variation, or that the taxon is poorly known or represents a species group. In the latter case molecular, morphometric or reproductive data are the only means of identifying the component species, which is beyond the scope of this study. Species are arranged alphabetically by genus and species, with informally named species at the end of each genus. Generic diagnoses are modified slightly after Wilson *et al.* (2003). Higher taxa (subfamily) are not used given the current uncertainties in the phylogeny at this level (Bakken & Wilson 2005). Terminology for parapodial and chaetal features also follows Bakken & Wilson (2005).

Species concept. In the absence of a phylogeny for most species of Nereididae, the definition of a species adopted here is the morphospecies concept as defined by Cronquist (1978), i.e., species are the smallest groups that are consistently and persistently distinct, and distinguishable by ordinary means. The proposed species are therefore hypotheses which are falsifiable when independent data, for example morphological synapomorphies and DNA sequences, become available.

Results

Taxonomic account

Nereididae Blainville, 1818

Ceratonereis Kinberg, 1865

Ceratonereis Kinberg 1865: 170–171.

Type-species. *Ceratonereis mirabilis* Kinberg, 1866, by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove; palpostyles conical. Prostomium with anterior margin indented. Eyes present, 2 pairs. One apodous anterior segment. Tentacular cirri with distinct

cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths, arranged in discrete areas. Oral ring paragnaths and papillae absent. Notoaciculae present on segments 1 and 2. Dorsal notopodial ligule present. Prechaetal notopodial lobe absent. Ventral notopodial ligule present. Acicular process absent. Dorsal cirrus mid-dorsally to sub-terminally attached to dorsal notopodial ligule on posterior chaetigers. Basal cirrophore of dorsal cirrus present, at most as long as ventral notopodial ligule or much longer than ventral notopodial ligule. Neuropodial postchaetal lobe present, at least on some anterior chaetigers. Ventral neuropodial ligule of anterior chaetigers present. Notochaetae are sesquigomph spinigers and sesquigomph falcigers; blades distally bifid or with single distal tooth. Neurochaetae dorsally are sesquigomph spinigers, heterogomph falcigers and sesquigomph falcigers; blades distally bifid or with single distal tooth. Neurochaetae, ventrally are heterogomph spinigers, heterogomph falcigers; blade lacking distinct tendon on terminal tooth, terminally bifid or with single terminal tooth. Anal cirri cirriform or conical.

***Ceratonereis australis* Hartmann-Schröder, 1985**

(Fig. 1A)

Ceratonereis (*Ceratonereis*) *singularis australis* Hartmann-Schröder, 1985: 46–47, figs 48–58.

Ceratonereis singularis australis.—Pamungkas & Glasby 2015: 6–8, fig. 3a, b.

Material examined. AM: W.44315-T, MI QLD 2384 (1); W.43825, MI QLD 2355 (1); W.45317, MI QLD 2426 (1). **NTM:** W22557 (1), Off Granite Bluff, 14°S, 145°E, coll. M. Blazewicz, 17 Apr 2008; W23939 (1), Mermaid Cove (buoy), 14°38.7612'S, 145°27.2159'E, coll. CReefs Lizard Team, 27 Aug 2010; W23950 (1), MacGillivray Reef, 14°38.8751'S, 145°29.196'E, coll. CReefs Lizard Team, 31 Aug 2010.

Comparative material examined. NTM: W23808 (9), Banda, Maluku Province, Indonesia.

Diagnosis. *Ceratonereis* species with two brown bands dorsally across chaetigers 2 and 3 (Fig. 1A); dorsal cirri increasing in relative length greatly over first 20 chaetigers or so, to become about 2 x width of body (without parapodia) by mid-body; neuropodial postchaetal lobe rounded in anterior parapodia.

Remarks. In accordance with the species concept used in this study, and following Wilson *et al.* (2003), *Ceratonereis singularis australis* is elevated to species level. The specimens examined agree well with Hartmann-Schröder's (1985) description of this subspecies, especially in the characteristic pigmentation pattern, paragnath count and parapodial morphology. The specimens are similar to *C. tentaculata*. Both species belong to the *C. mirabilis* group as recognised by Perkins (1980)), which has very long tentacular and dorsal cirri and Area III with fewer paragnaths (7) than Area IV, and the dorsal notopodial ligule similar in size to the ventral neuropodial ligule in the anterior parapodia.

Habitat. Lagoon, fore-reef and reef slope, 15–20 m.

Type locality. Exmouth, Western Australia.

Distribution. Australia and eastern Indonesia. First record for Lizard Island.

***Ceratonereis japonica* Imajima, 1972**

Ceratonereis japonica Imajima, 1972: 69–71, figs 15a–p, 17.

Material examined. NTM: W23995 (1), Channel bommies, 14°41.3088'S 145°27.8339'E, coll. CReefs Lizard 10 Team, 25 Aug 2010.

Comparative material examined. NTM: W25885 (1), W25884 (1), Tanjung Merah, Bitung, North Sulawesi, Indonesia, 1°27'N, 125°12'E.

Diagnosis. *Ceratonereis* species having rod-like paragnaths arranged in eight groups in maxillary ring (Areas I: 6 in single cluster; II: 6–8 in single cluster on each side; III: 5 in each of 3 clusters; IV: 3 in single cluster on each side (but some paragnaths apparently missing as a result of damage); oval-shaped yellow glands at base of dorsal cirri chaetigers.

Remarks. The present specimen, which is epitokous, corresponds with the description of Imajima (1972), particularly in the arrangement of paragnaths in eight groups in the maxillary ring, which sets it apart from other *Ceratonereis* and allies it more with *Solomononereis*. Indeed this species shows intermediate characteristics between *Ceratonereis* and *Solomononereis*: like members of *Ceratonereis* it is large-bodied, has a deeply-cleft

anterior prostomium and large postchaetal neuropodial lobes, but like the latter it has rod-like paragnaths (Imajima refers to them as cones, but his illustrations are indicative of rods) and oval-shaped yellow glands at the base of dorsal cirri chaetigers. Because of these similarities Nateewathana (1992) suggested that the original material of *Ceratonereis japonica* Imajima, 1972 should be re-examined to determine whether it should be included in *Solomononereis*. As the two genera were shown by Bakken & Wilson (2005) to be sister groups, then a more inclusive systematic study is required to investigate the taxonomic position of species.

Habitat. *Halimeda* and coral rubble between bommies, 12 m.

Type locality. Koniya, Amami-Ōshima, southern Japan.

Distribution. Southern Japan, Indonesia. First record for Lizard Island, and Australia.

***Ceratonereis perkinsi* Hartmann-Schröder, 1985**

(Fig. 1B)

Ceratonereis perkinsi Hartmann-Schröder, 1985: 43–45, figs 24–35.

Material examined. AM: W.44508, MI QLD 2413 (1); W.44320, MI QLD 2388 (1); W.44305, MI QLD 2381 (1); W.47494, MI QLD 2410 (1); W.47538-T, MI OLD 2424 (4); W.47537-T, MI QLD 2443 (1). **NTM:** W22502-T (1), off Casuarina Beach, 14°40.82'S 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22571 (1), NW side of Palfrey Island, 14°41.4'S 145°26.58'E, coll. C. Glasby, C. Watson & M. Blazewicz, 10 Apr 2008; W22573-T (1), Big Vicky Reef, NW of Palfrey Island, 14° S 145° E, coll. K. Mills, 12 Apr 2008; W22577 (1), North Point, 14°38.73'S 145°27.2'E, coll. C. Watson, N. Bruce & P. Bock, 12 Apr 2008; W22583-T (1), North Head Reef, 14°38.74'S 145°27.19'E, coll. C. Glasby, 14 Apr 2008; W22624-T (1); North Direction Island, 14°44.57'S 145°30.85'E, coll. C. Watson, 24 Feb 2009; W22643 (1), Snake Pit, 14°40.2'S 145°34.09'E, coll. J. Caley & S. Smith, 24 Feb 2009; W22646 (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz, 13 Feb 2009; W22647 (1), Coconut Beach, 14°40.86'S 145°28.35'E, coll. F. Michonneau, 26 Feb 2009; W22671 (1), North Direction Island, 14°44.81'S 145°30.3'E, coll. C. Watson, 24 Feb 2009; W22676 (1), North Direction Island, 14°44.57'S 145°30.85'E, coll. C. Watson, 24 Feb 2009; W22695 (1), Snake Pit, 14°40.2'S 145°34.04'E, coll. J. Caley & S. Smith, 25 Feb 2009; W22704 (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz, 13 Feb 2009; W22707 (1), Hicks Reef Outer Barrier, 14°28.83'S 145°29.23'E, coll. C. Watson & K. Mills, 14 Feb 2009; W22734 (1), North Direction Island, 14°44.57'S 145°30.85'E, coll. C. Watson, 24 Feb 2009; W22739 (1), North Direction Island, 14°44.57'S 145°30.85'E, coll. C. Watson, 24 Feb 2009; W22748 (1), North Direction Island, 14°44.81'S 145°30.3'E, coll. C. Watson, 24 Feb 2009; W22756 (1), Coconut Beach, 14°40.88'S 145°28.35'E, coll. C. Watson, 7 Feb 2009; W23920 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042' E, coll. CReefs Lizard Team, 27 Aug 2010; W23925 (1), Turtle Beach, 14°39.153'S 145°27.042'E, CReefs Lizard Team, 7 Sep 2010; W23936 (1), Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard Team, 27 Aug 2010; W23968 (1), Lagoon, 14°41.232'S 145°27.294'E, coll. CReefs Lizard Team, 7 Sep 2010; W23975 (1), Mrs Watson's Bay, 14°39.453'S 145°26.6592'E, coll. CReefs Lizard 10 Team, 14 Feb 2009; W23978 (1), Turtle Beach, 14°39.1392'S 145°27.072'E, coll. CReefs Lizard Team, 30 Aug 2010; W23989 (1), Mermaid Cove (buoy), 14°38.7612'S 145°27.2159'E, coll. CReefs Lizard Team, 27 Aug 2010; W23994 (1), MacGillivray Reef, 14°39.3828'S 145°29.5199'E, coll. CReefs Lizard Team, 29 Aug 2010; W23996 (1), lagoon between Palfrey Island and South Island, 14°41.8481'S 145°27.0119'E, coll. CReefs Lizard Team, 1 Sep 2010; W24008 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard Team, 26 Aug 2010; W24015 (1), MacGillivray Reef, 14°39.3828'S 145°29.5199'E, coll. CReefs Lizard Team, 29 Aug 2010.

Comparative material examined. NTM: W19030 (1), Lee Point, Darwin Harbour, 12°19'S 130°53'E.

Diagnosis. *Ceratonereis* species having irregular transverse brown stripes on antero-dorsal body in live specimens (pigmentation faded slightly in preserved specimens; Fig. 1B); Area III with more paragnaths (17–18) than Area IV; small triangular neuropodial postchaetal lobe in anterior parapodia, and dorsal notopodial ligule about ½ thickness and slightly shorter than ventral neuropodial ligule.

Remarks. The specimens from Lizard Island agree well with the description of Hartmann-Schröder (1985).

Habitat. Lagoon, fore-reef and reef slope, 2–30 m.

Type locality. Broome, Western Australia.

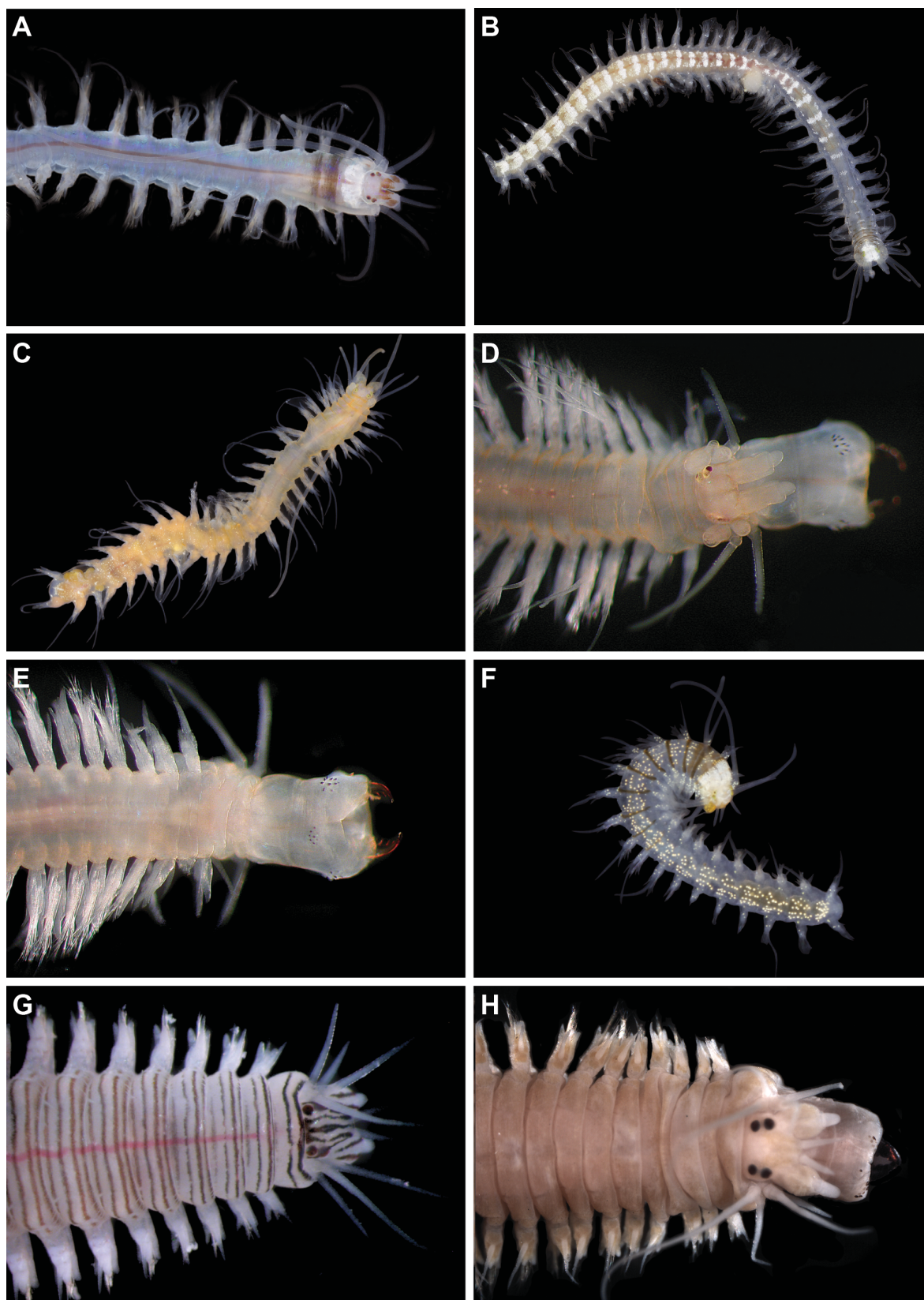


FIGURE 1. A. *Ceratonereis australis* AM W.44315, alive, antero-dorsal view; B. *C. perkinsi* AM W.44320, alive, dorsal view; C. *C. tentaculata* AM W.44314, alive, dorsal view; D. *C. tentaculata* NTM W22558, preserved, antero-dorsal view; E. *C. tentaculata* NTM W22558, preserved, antero-ventral view; F. *C. 'multistripe'* AM W.47563' AM W.47563, alive, antero-dorsal view; G. *Compositia marmorata* NTM W22530, alive, antero-dorsal view; H. *C. marmorata* NTM W22530, preserved, antero-dorsal view, pharynx everted. Photo: Alexander Semenov (A–C, F). Approximate body widths: A: 1.2 mm; B: 1.8 mm; C: 1.9 mm; D, E: 2.0 mm; F: 1.4 mm; G, H: 2.6 mm.

Distribution. Western, southern and south-eastern Australia, New Guinea, Tonga. First record for Lizard Island.

***Ceratonereis tentaculata* Kinberg, 1865**

(Fig. 1C–E)

Ceratonereis tentaculata Kinberg, 1865: 170; 1910: 51, Pl. 20, fig. 5b–g.

Ceratonereis tentaculata.—Monro 1931:18; Perkins 1980: 11–15, fig. 5.

Material examined. AM: W.44314, MI QLD 2379 (1); W.44317, MI QLD 2390 (1); W.43791-T, MI QLD 2331 (1); W.43790, MI QLD 2331 (1); W.47530-T, MI QLD 2446 (3). **NTM:** W22558 (1), Day Reef, 14°28.59'S 145°32.64'E, coll. M. Ekins, 10 Apr 2008; W22609-T (1), Macs Reef, 14°39.49'S 145°29.48'E, coll. K. Mills & S. Smith, 25 Feb 2009; W23911 (1), lagoon, 14°41.232'S 145°27.294'E, coll. CReefs Lizard Team, 7 Sep 2010; W23927 (1), north end of Mrs Watsons Bay, coll. 14°39.3156'S 145°26.788'E, inter-reef sand, coll. CReefs Lizard 09 Team, 6 Feb 2009; W23946 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard Team, 3 Sep 2010; W23947 (1), Mermaid Cove (buoy), 14°38.7612'S 145°27.2159'E, coll. CReefs Lizard Team, 27 Aug 2010; W23958 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W23972 (1), MacGillivray Reef, 14°39.51'S 145°29.562'E, coll. CReefs Lizard Team, 8 Sep 2010; W23997 (1), MacGillivray Reef, 14°38.8751'S 145°29.196'E, coll. CReefs Lizard Team, 31 Aug 2010; W24004 (1), Coconut Beach, 14°40.884'S 145°28.35'E, coll. C. Watson, 7 Feb 2009; 1W24010 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W24017 (1), Washing Machine, 14°39.228'S 145°27.804'E, coll. CReefs Lizard Team, 3 Sep 2010; W24019 (1), High Rock, 14°49.5108'S 145°33.096'E, coll. CReefs Lizard Team, 6 Sep 2010.

Diagnosis. *Ceratonereis* species with tentacular cirri extending to chaetigers 15–20 and dorsal cirri about as long as body is wide (Fig. 1C); only subtle body pigmentation when alive (presence of inter-segmental orange pigment on anterior segments), which usually fades in preserved specimens (Fig. 1D); Area III of proboscis with slightly fewer paragnaths (6–9) than Area IV (Fig. 1E); dorsal notopodial ligule similar in size to ventral neuropodial ligule in anterior chaetigers.

Remarks. The specimens from Lizard Island agree well with Perkin's (1980) redescription of the species. They resemble *Ceratonereis longiceratophora* Hartmann-Schröder, 1985, but may be distinguished from this species as *C. longiceratophora* has more paragnaths in Area III (13) compared to Area IV (10).

Habitat. Most common on reef slope associated with *Halimeda* and rubble, 3–30 m. Lizard Island and Day Reef, Outer Barrier Reef.

Type locality. Oahu, Hawaii.

Distribution. Hawaii, Japan. First record for Lizard Island.

***Ceratonereis* 'multistripe' AM W.47563' Glasby**

(Fig. 1F)

Material examined. AM: W.43794-T, MI QLD 2331 (1); W.47563, MI QLD 2331 (1); W.47562, MI QLD 2352 (1). **NTM:** W22582-T (1), North Head Reef, 14°38.74'S 145°27.19'E, coll. C. Glasby, 14 Apr 2008; W22611-T (1), Coconut Beach, 14°41.06'S 145°28.31'E, coll. M. Blazewicz-Paskowycz, 17 Feb 2009; W23900 (1), North Point, 14°38.67'S 145°27.276'E, coll. CReefs Lizard Team, 31 Aug 2010; W23904 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard Team, 27 Aug 2010; W23912 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard Team, 26 Aug 2010; W23944 (1), MacGillivray Reef, 14°38.8751'S 145°29.196'E, CReefs Lizard Team, 31 Aug 2010.

Diagnosis. *Ceratonereis* species having brown band dorsally on chaetiger 2 followed by thinner brown transverse stripes on next 10 (max.) chaetigers (Fig. 1F); Area III of proboscis with fewer paragnaths (8) than Area IV; dorsal notopodial ligule significantly thinner and slightly shorter than ventral notopodial ligule in anterior chaetigers.

Remarks. An informal taxon name is introduced for this species. Full description of the species, including a decision on whether it is new or not, will depend on the results of a molecular study.

Habitat. Lagoon, fore-reef and reef slope, 4–20 m.

***Composetia* Hartmann-Schröder, 1985**

Ceratonereis (*Composetia*) Hartmann-Schröder, 1985: 49.

Composetia Khlebovich, 1996: 122.

Type-species. *Nereis costae* Grube, 1840 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths, arranged in discrete areas. Oral ring paragnaths and papillae absent. Dorsal notopodial ligule present. Prechaetal notopodial lobe present. Ventral notopodial ligule present. Acicular process absent. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial postchaetal lobe present, at least on some anterior chaetigers. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers. Neurochaetae dorsally are homogomph spinigers, sesquigomph spinigers (may be absent), homogomph and sesquigomph falcigers (may be absent). Neurochaetae, ventrally are homogomph spinigers, homogomph falcigers (may be absent), heterogomph falcigers (may be absent); blades lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

***Composetia marmorata* (Horst, 1924)**

(Figs 1G, H; 2A)

Nereis (*Ceratonereis*) *marmorata* Horst, 1924: 177–178, pl. 34, figs 13–16.

Composetia marmorata.—Pamungkas & Glasby 2015: 8–9, fig. 3c, d.

Material examined. NTM: W22530-T (1), Big Vicky Reef, NW of Palfrey Island, 14°S 145°E, coll. K. Mills, 12 Apr 2008; W22615-T (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz, 13 Feb 2009; W22797-T (1), Macs Reef, 14°39.49'S 145°29.48'E, coll. K. Mills & S. Smith, 25 Feb 2009.

Comparative material examined. NTM: W23811 (1), Salawati, Raja Ampat, Indonesia. *Nereis* (*Ceratonereis*) *marmorata* ZMA VPol 0869 (17 syntypes) and RMNH1352 (5 syntypes), R/V Siboga Stn 172, Gisser anchorage, between this island and Seram-Laut, Maluku, Indonesia, 3° 53.1534'S 130°51.934'E, coll. 26 Aug 1899.

Diagnosis. *Composetia* species having distinctive marmorated-stripes on antero-dorsal body and prostomium (Fig. 1G); paragnaths conical, arranged as follows (n = 1): Areas I: 1; II: 8–9 in cluster of two curved rows; III: 3; IV: 10–12 in triangular cluster (Figs 1H, 2A).

Remarks. The markings are as described by Horst (1924: 177) for *Nereis* (*Ceratonereis*) *marmorata*; pigmentation fades in preserved specimens (Figs 1H, 2A). Examination of paragnath numbers in the syntypes confirmed the identification; the number in Area III appears to be highly variable, from 3 reported here to 4–18 in the syntype material as described by Horst (1924). This species was not collected in the August 2013 survey.

Habitat. Lagoon to reef slope, 3–30 m.

Type locality. Between Gisser and Seram-Laut, Maluku, Indonesia.

Distribution. Indonesia. First record for Lizard Island and Australia.

***Leonnates* Kinberg, 1865**

Leonnates Kinberg, 1865: 168.

Type-species. *Leonnates indicus* Kinberg, 1865, by monotypy.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin, or with anterior margin indented (only in *L. stephensoni*). Eyes present, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with smooth or slightly crenulate cutting edge. Maxillary ring of pharynx with paragnaths and sometimes papillae. Oral ring papillae present, paragnaths absent. Dorsal notopodial ligule present. Prechaetal notopodial lobe

present. Ventral notopodial ligule present (thus notopodium of 3 similar sized ligules/lobes). Acicular process absent. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial prechaetal lobe absent. Neuropodial postchaetal lobe present, at least on some anterior chaetigers. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers, homogomph falcigers present or absent. Neurochaetae dorsally are heterogomph spinigers (may be absent), heterogomph falcigers (may be absent), homogomph spinigers (may be absent), homogomph falcigers (may be absent), sesquigomph spinigers (may be absent), sesquigomph falcigers (may be absent); falciger blade with single distal tooth. Neurochaetae ventrally are heterogomph spinigers (may be absent), homogomph spinigers (may be absent), sesquigomph spinigers, homogomph falcigers (may be absent), heterogomph falcigers (may be absent); falciger blades lacking distinct tendon on terminal tooth.

***Leonnates crosnieri* León-González & Salazar-Vallejo, 2003**

(Fig. 2B)

Leonnates crosnieri León-González & Salazar-Vallejo, 2003: 366–368, fig. 1a–g.

Leonnates jousseaumi.—Hutchings & Reid 1991: 52–53. Non Gravier, 1899.

Material examined. NTM: W22504-T (1), SW of Palfrey Island, 14°41.65'S 145°27.93'E, 4 m, coll. M. Ekins, 13 Apr 2008; W22559 (1), Off Granite Bluff, 14°S 145°E, coll. M. Blazewicz, 17 Apr 2008; W22584-T (1), North Head Reef, 14°38.74'S 145°27.19'E, coll. C. Glasby, 14 Apr 2008; W22694 (1), Snake Pit, 14°40.2'S 145°34.04'E, coll. J. Caley & S. Smith, 25 Feb 2009; W22799-T (1), Washing Machine, 14°16.91'S 145°18.13'E, coll. M. Timmers, 26 Feb 2009, W23916 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard Team, 27 Aug 2010; W23984 (1), Mrs Watsons Bay, 14°39.453'S 145°26.6592'E, coll. CReefs Lizard Team, 14 Feb 2009; W23992 (1), Turtle Beach, 14°39.153'S 145°27.042'E, coll. CReefs Lizard Team, 7 Sep 2010; W24002 (1), North Direction Island, 14°45.0672'S 145°30.7559'E, coll. CReefs Lizard Team, 4 Sep 2010; W25883 (1), North Linnet Island, 14°46.743'S 145°21.036'E, coll. CReefs Lizard Team, 16 Feb 2009.

Diagnosis. *Leonnates* species with longitudinal stripes on mid-prostomium and transverse stripe on posterior edge of prostomium (Fig. 2B); notopodial prechaetal lobe present in parapodia of posterior body, and notopodial homogomph falcigers present; conical paragnaths and papillae on maxillary ring, papillae only on oral ring, arranged as follows (n = 3): Areas I: 0; II: 4–6 paragnaths in cluster; III: 5 papillae in a transverse line; IV: 4–8 paragnaths in cluster; V: 0; VI: 5–10 papillae in cluster; VII–VIII: 34–36 papillae in 2 or 3 rows mid-ventrally.

Remarks. This species was reported from Lizard Island as *Leonnates jousseaumi* by Hutchings & Reid (1991). The present specimens fit well the description of León-González & Salazar-Vallejo (2003), apart from the slightly lower paragnath counts, which may be attributable to the smaller body size of the present material. As remarked upon by these authors *L. crosnieri* is very similar to *L. indicus* Kinberg, 1865, and apparently differs only by the presence of the notopodial prechaetal lobe (=superior notopodial lobe of these authors) in parapodia of the posterior body; this lobe has disappeared by chaetiger 51 in the holotype of *L. indicus* and was absent from far posterior segments in most of the other material examined according to the redescription of Qiu & Qian (2000: 1138). The other supposed differences cited by León-González & Salazar-Vallejo (2003) including number of papillae in Area VI and distribution along body of notopodial homogomph falcigers are not applicable and appear to have resulted from these authors not considering the full range of variation reported by Qiu & Qian (2000) for *L. indicus*. *Leonnates crosnieri* was not collected in the August 2013 survey.

Habitat. Lagoon, fore-reef and reef slope, 4–30 m.

Type locality. New Caledonia.

Distribution. New Caledonia. First record for Lizard Island and Australia.

***Leonnates nipponicus* Imajima, 1972**

(Fig. 2C)

Leonnates nipponicus Imajima, 1972: 41–43, fig. 2a–l, fig. 7.

Leonnates nipponicus.—Qiu & Qian 2000: 1137–1138.

Material examined. NTM: W23962 (1), Martin Reef, 14°45.36'S, 145°21.822'E, coll. CReefs Lizard Team, 30 Aug 2010.

Diagnosis. *Leonnates* species with uniform dark brown antero-dorsal pigmentation (Fig. 2C); absence of notopodial homogomph falcigers. Conical paragnaths and papillae on maxillary ring, papillae only on oral ring, arranged as follows (n = 1): Areas I: 0; II: 7 paragnaths in cluster of 2 rows; III: 5 papillae in transverse line; IV: 8–10 paragnaths in triangular cluster; V: 0; VI: 15 or 16 papillae in circular cluster; VII–VIII: ~80 papillae in 2 or 3 rows mid-ventrally.

Remarks. This rarely collected species fits well the description of Imajima (1972), particularly in the key differences that distinguish it from the closely similar *L. indicus* and *L. crosnieri*; that is, the absence of notopodial homogomph falcigers, and the uniform dark brown antero-dorsal pigmentation pattern. As we currently lack a good understanding of morphological variability in the species, it is not possible to know whether the higher papillae count in Area VI of the present specimens compared to Imajima's (15 or 16 vs 4 or 5) represents intraspecific variation or perhaps indicates that the Lizard Island form is new.

Habitat. Back Reef - silt grey sand and coral rubble. Also from corals in southern Japan.

Type locality. Amami-Oshima, southern Japan.

Distribution. Southern Japan. First record for Lizard Island and Australia.

***Micronereis* Claparède, 1863**

Micronereis Claparède, 1863: 57.

Type-species. *Micronereis variegata* Claparède, 1863, by monotypy.

Diagnosis. Frontal antennae absent. Palpophore with transverse groove; palpostyles spherical or conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment. Tentacular cirri lacking cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths on undivided proboscis. Oral ring paragnaths present, crown-shaped, arranged in regular rows. Dorsal notopodial ligule absent throughout (a single major notopodial acicular ligule present, dorsal cirrus present on an enlarged cirrophore). Prechaetal notopodial lobe absent. Acicular process absent. Ventral notopodial ligule absent. Dorsal cirri lacking basal cirrophore. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule of anterior chaetigers absent. Ventral cirri single. Notoaciculae absent from segments 1 and 2 (only confirmed as yet for *M. bansei*). Notochaetae are homogomph spinigers, and homogomph falcigers (may be absent); blades without terminal tendon, multidentate, with 2 or more small lateral teeth. Neurochaetae dorsally are homogomph spinigers, homogomph falcigers. Neurochaetae, ventrally are homogomph spinigers. Anal cirri cirriform or conical.

***Micronereis bansei* (Hartmann-Schröder, 1979) (Fig. 2D)**

Quadricirra bansei Hartmann-Schröder, 1979: 121–122: figs 227–237.

Micronereis bansei.—Paxton 1983: 11–12, figs 1, 14–27.

Material examined. AM: W.17179–17188 (several), Lizard Island, 100 m off eastern end of Mangrove Beach, 14°40.2'S 145°28.2'E, 3 m, coll. A.R. Jones & C.J. Short, 1978; W.17189 (1), Lizard Island, 1.6 km south-west of Eagle Island, 14°40.2'S 145°28.2'E, 7.6 m, coll. J. Young & P. Terrill, 1978. **NTM:** W22614-T (1), Linnet Reef, 14°46.83'S 145°20.96'E, coll. M. Blazewicz-Paskowycz, 23 Feb 2009; W22659 (1), Hicks Reef Outer Barrier, 14°28.83'S 145°29.23'E, coll. C. Watson & K. Mills, 14 Feb 2009; W22663 (1), MacGillivray Reef, 14°39.4'S 145°29.68'E, coll. C. Watson & M. Timmers, 21 Feb 2009; W23165-T (1), Hicks Reef Outer Barrier, 14°28.83'S 145°29.23'E, coll. C. Watson & K. Mills, 14 Feb 2009.

Remarks. The present specimens are juveniles with up to 12 chaetigers (Fig. 2D); 20–22 chaetigers are characteristic of adults of the species according to Paxton (1983), who previously reported the species from Lizard Island. This species was not collected in the August 2013 survey.

Habitat. Fore reef, sand, 2–18 m.

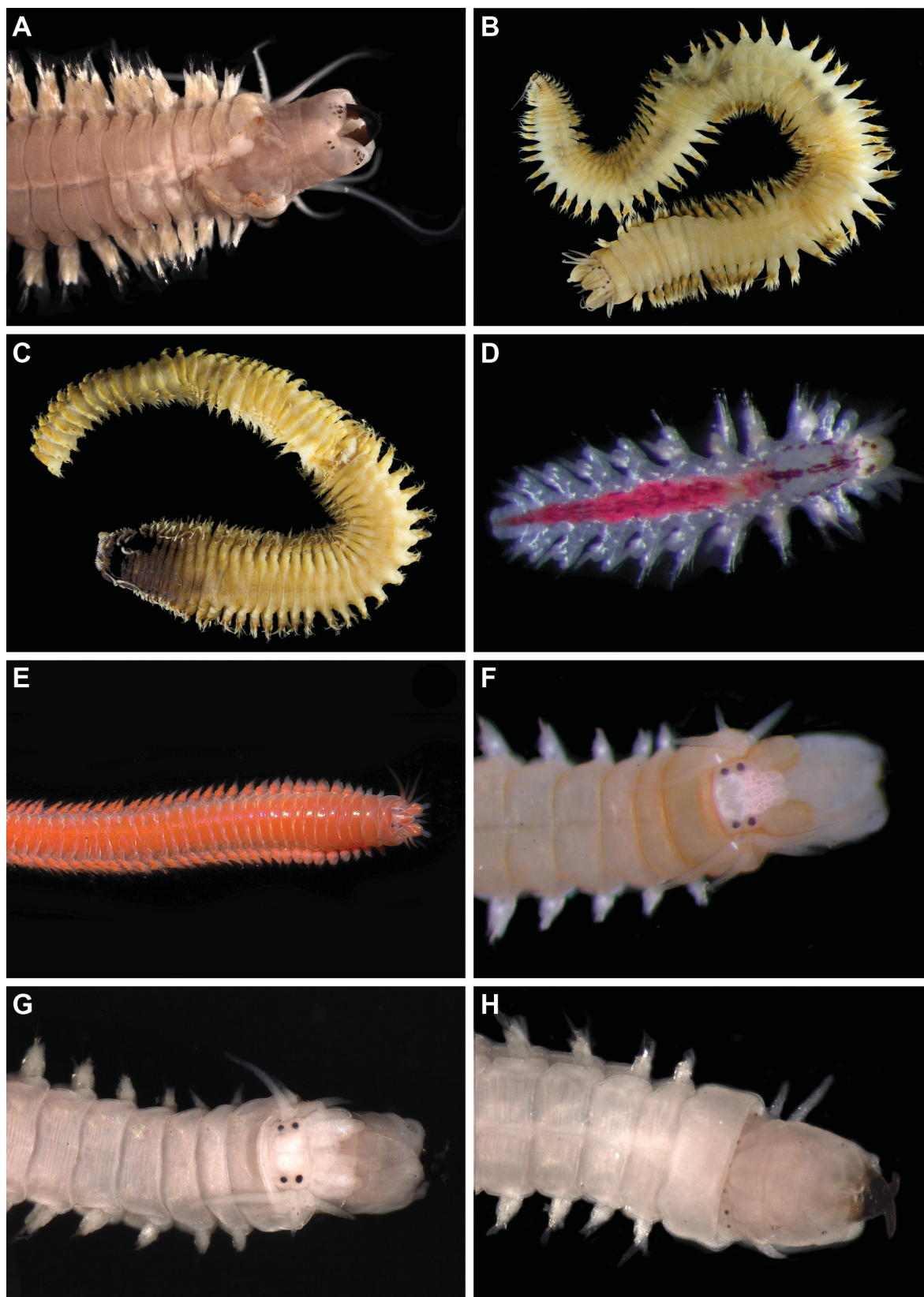


FIGURE 2. A. *Compositetia marmorata* NTM W22530, preserved, antero-ventral view, pharynx everted; B. *Leonnates crosnieri* NTM W23992, preserved, dorsal view; C. *L. nipponicus* NTM W23962, preserved, dorsal view; D. *Micronereis bansei* NTM W22659, alive, dorsal view; E. *Neanthes pachychaeta* NTM W22800, preserved, antero-dorsal view; F. *Nereis* cf. *cirriseta* NTM W22523, alive, antero-dorsal view; G. *N. cf. cirriseta* NTM W22523, preserved, antero-dorsal view, pharynx everted; H. *N. cf. cirriseta* NTM W22523, preserved, antero-ventral view, pharynx everted. Approximate body widths: A: 2.6 mm; B, C: 5.0 mm; D: 0.4 mm; E: 4.0 mm; F–H: 0.9 mm.

Type locality. Gantheaume Point, Broome, Western Australia.

Distribution. Suez Canal and northern Australia, south to Sydney on the east coast.

***Namalycastis* Hartman, 1959**

Namalycastis Hartman, 1959: 163–164.

Type-species. *Lycastis abiuma* Grube, 1872 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore compact, no transverse groove; palpostyles spherical. Prostomium with entire anterior margin. Eyes present or absent. One apodous anterior segment, equal to or less than length of chaetiger 1. Four pairs of tentacular cirri. Tentacular cirri with cirrophores. Jaws with dentate cutting edge. Maxillary and oral ring of pharynx without paragnaths or papillae. Notopodium strongly reduced, lacking identifiable ligules or lobes. Dorsal cirri simple, lacking basal cirrophore. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule absent. Ventral cirri single. Notoaciculae present on segments 1 and 2. Notochaetae are sesquigomph spinigers (rarely absent). Neurochaetae dorsally are heterogomph spinigers (rarely), sesquigomph spinigers, heterogomph falcigers; blades serrated. Neurochaetae ventrally are heterogomph spinigers, heterogomph falcigers. Pygidium multi-incised. Anal cirri cirriform. Oocytes spherical.

***Namalycastis abiuma* (Grube, 1872) species group Glasby, 1999**

Lycastis abiuma Grube, 1872: 47–49.

Namalycastis abiuma (Grube) species group Glasby, 1999: 31–35, figs 1c, 8a, b, 9.

Material examined. AM: W.20243 (22), Crystal Beach, 14°40.2'S 145°28.2'E, 0 m, coll. P.A. Hutchings & A. Reid, 1986; W.20244 (1), upper reaches of creek at Crystal Beach, 14°40.2'S 145° 28.2'E, 0 m, coll. P.A. Hutchings & A. Reid, 1985.

Diagnosis. *Namalycastis* species with brown pigmentation antero-dorsally and on pygidium; one or few notochaetae usually present; subneuroacicular spinigers of mid-posterior parapodia having coarsely serrated blades.

Remarks. This species was first reported from Lizard Island by Glasby (1999), who described it as a species group because of the large intraspecific variation; component species within the group were not named. A subsequent combined molecular/morphometric study of this species group in India showed the existence of multiple cryptic species within a region (Magesh *et al.* 2014). The specimens found at Lizard Island are therefore almost certainly different from the type specimens from Santa Catarina Island, Brazil; however, they are not described as a new species until further material is collected including specimens for molecular studies.

Habitat. Mud and detritus in creek.

Type locality of species. Santa Catarina Island, Brazil.

Distribution. Circum-tropical and -subtropical.

***Namanereis* Chamberlin, 1919**

Namanereis Chamberlin, 1919: 196.

Type-species. *Lycastis quadraticeps* Chamberlin, 1919 by original designation.

Diagnosis. Frontal antennae present, 1 pair, or absent (rarely). Palpophore compact, no transverse groove; palpostyles spherical. Prostomium with entire anterior margin. Eyes present or absent. One apodous anterior segment, equal to or less than length of chaetiger 1. Three or four pairs of tentacular cirri. Tentacular cirri with distinct cirrophores or lacking cirrophores. Jaws with smooth or slightly crenulate cutting edge or with dentate cutting edge, forms with a crenulate cutting edge have 2 teeth proximally. Maxillary and oral ring of pharynx without paragnaths or papillae. Notopodium strongly reduced, lacking identifiable ligules or lobes. Dorsal cirri simple, lacking basal cirrophore. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule absent. Ventral

cirri single. Notoaciculæ present on segments 1 and 2. Notochaetae are sesquigomph spinigers (usually absent). Neurochaetae dorsally are heterogomph spinigers (usually absent), sesquigomph spinigers (maybe absent), heterogomph falcigers; blades serrated. Neurochaetae ventrally are heterogomph spinigers (usually absent) heterogomph falcigers (some forms with very long blades = pseudospinigers). Pygidium with three incisions marking lateral and dorsal lobes. Anal cirri cirriform or conical or short, stout and appearing as an extension of the pygidium. Oocytes spherical (rarely), or ovoid.

Namanereis amboinensis (Pflugfelder, 1933)

Lycastopsis amboinensis Pflugfelder, 1933: 69–71, figs 9–11.

Namanereis amboinensis.—Glasby 1999: 76–79, figs 1c, 3, 31a–g, 32.

Material examined. None.

Remarks. No further specimens of this species have been found since specimens examined by Glasby (1999).

Type locality. Ambon, Maluku, Indonesia.

Distribution. Circumtropical and subtropical.

Neanthes Kinberg, 1865

Neanthes Kinberg, 1865: 171.

Type-species. *Neanthes vaalii* Kinberg, 1865 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove; palpostyles conical. Prostomium with entire anterior margin. Eyes present or absent. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths. Oral ring paragnaths present, or absent (rarely). Dorsal notopodial ligule present. Prechaetal notopodial lobe present or absent (when present notopodium of 3 similar sized ligules/lobes). Ventral notopodial ligule present. Acicular process present or absent. Dorsal cirrus simple, lacking basal cirrophore. Dorsal cirri single. Neuropodial prechaetal lobe absent. Neuropodial postchaetal lobe absent or present. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculæ absent from segments 1 and 2. Notochaetae are homogomph spinigers. Neurochaetae dorsally are heterogomph spinigers (may be absent), homogomph spinigers, heterogomph falcigers; blades serrated. Neurochaetae ventrally heterogomph spinigers (may be absent), homogomph spinigers (may be absent), heterogomph falcigers; blades lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

Neanthes cricognatha (Ehlers, 1904)

Nereis cricognatha Ehlers, 1904: 29–30, Pl. 4, figs 3–7.

Neanthes cricognatha.—Hutchings & Turvey 1982: 110–111; Wilson 1984: 213–214.

Material examined. **AM:** W.43469, MI QLD 2394 (1); W.47542-T, MI QLD 2441 (1). **NTM:** W22585-T (1), Off Casuarina Beach, 14°40.82'S 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22733 (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz, 13 Feb 2009; W23965 (1), Mrs Watson's Bay, 14°39.492'S 145°26.94'E, coll. CReefs Lizard Team, 30 Aug 2010.

Diagnosis. *Neanthes* species having three notopodial lobes/ligules (i.e., prechaetal notopodial lobe well developed) in anterior parapodia; broad band of paragnaths in Areas VII–VIII continuous with those in Areas V, VI.

Remarks. *Neanthes cricognatha* belongs to the *N. acuminata* species group, a world-wide distributed complex of similar species including the nominal species *N. acuminata* (Ehlers, 1868), *N. caudata* (delle Chiaje) and *N. arenaceodentata* Moore (Reish *et al.* 2014). Although the name *N. cricognatha* has been synonymised with both of the latter names previously, I follow Wilson (1984) in maintaining the name *N. cricognatha* for the Australian and New Zealand forms, particularly as recent molecular studies have suggested that the species group contains multiple evolutionary significant units (Reish *et al.* 2014).

Specimen AM W.43469 was collected in the water column of the lagoon. It was not epitokous, but the well-developed parapodia and small, fragile body of this species suggest that it may be well equipped for swimming.

Habitat. Lagoon and fore reef, sand and *Pessonalia* algae, 2–10 m; ?pelagic.

Type locality. New Zealand.

Distribution. Australia, widespread. First record for Lizard Island.

***Neanthes* sp. cf. *N. gisserana* (Horst, 1924)**

Nereis (Lycoris) gisserana Horst, 1924: 151–152, plate 30, figs 6, 7.

Nereis gisserana.—Monro 1939, fig. 302a–f.

Neanthes sp. cf. *N. gisserana*.—Pamungkas & Glasby 2015: 11–12, fig. 4c, d.

Material examined. AM: W.43796, MI QLD 2331 (1); W.43844, MI QLD 2342 (3); W.47554, MI QLD 2413 (2); W.43829, MI QLD 2342 (2); W.47545, MI QLD 2358 (1); W.47553, MI QLD 2354 (1); W.44510, MI QLD 2410 (1); W.45504, MI QLD 2441 (1); W.47550, MI QLD 2352 (1); W.47544-T, MI QLD 2436 (1); W.47540-T, MI QLD 2446 (2). **NTM:** W22501-T (1), off Casuarina Beach, 14°40.82'S 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22519-T (1), SW of Palfrey, 14°41.65'S 145°26.49' E, coll. C. Glasby, 8 Apr 2008; W22538 (1), Coconut Beach, 14°41.47'S 145°28.18'E, coll. C. Watson, 5 Apr 2008; W22539 (1), between Casuarina Beach and Palfrey Island, 14°40.92'S 145°26.83' E, coll. C. Glasby, 6 Apr 2008; W22541 (1), Coconut Beach, 14°41.47'S 145°28.18'E, coll. C. Watson, 5 Apr 2008; W22543 (1), Mangrove Beach, 14°40.79'S 145°27.74'E, coll. M. Blazewicz-Paskowycz, 12 Apr 2008; W22547 (1), entrance to lagoon, 14°41.22'S 145°27.93'E, coll. C. Glasby, 4 Apr 2008; W22552 (1), North Point, 14°38.73'S 145°27.2'E, coll. C. Watson, N. Bruce & P. Bock, 12 Apr 2008; W22555 (1), Coconut Beach, 14°41.47'S 145°28.18'E, coll. C. Watson, 5 Apr 2008; W23901 (1), Day Reef, 14°28.7088'S 145°30.8999'E, coll. CReefs Lizard Team, 5 Sep 2010; W23905 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard Team, 27 Aug 2010; W23922 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard Team, 26 Aug 2010; W23923 (1), lagoon, 14°41.232' S 145°27.294' E, coll. CReefs Lizard Team, 7 Sep 2010; W23926 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard Team, 3 Sep 2010; W23938 (1), North Direction Island, 14°45.0672'S 145°30.7559'E, coll. CReefs Lizard Team, 4 Sep 2010; W23948 (1), Day Reef, 14°28.3308'S 145°31.41' E, coll. CReefs Lizard Team, 5 Sep 2010; W23953 (1), Mrs Watsons Bay, 14°39.453'S 145°26.6592'E, coll. CReefs Lizard Team, 14 Feb 2009; W23956 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W23963 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard Team, 9 Sep 2010; W23967 (1), High Rock, 14°49.56'S 145°33.1319'E, CReefs Lizard Team, 11 Sep 2010; W23974 (1), MacGillivray Reef, 14°38.8751'S 145°29.196'E, coll. CReefs Lizard Team, 31 Aug 2010; W23988 (1), MacGillivray Reef, 14°39.3828'S 145°29.5199'E, coll. CReefs Lizard Team, 29 Aug 2010; W23990 (1), Coconut Beach, 14°41.052'S 145°28.1999'E, coll. CReefs Lizard Team, 25 Aug 2010; W24001 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W24005 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W24016 (1), High Rock, 14°49.5108'S 145°33.096'E, coll. CReefs Lizard Team, 6 Sep 2010; W24042 (1), Mermaid Cove / North Point, 14°38.7612'S 145°27.2159'E, coll. CReefs Lizard Team, 7 Sep 2010; W22796-T (1), Day Reef, 14°28.5'S 145°32.19'E, coll. S. Smith, 22 Feb 2009; W23918 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W23919 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard Team, 9 Sep 2010; W23929 (1), Turtle Beach, 14°39.153'S 145°27.042'E, CReefs Lizard Team, 7 Sep 2010; W23934 (1), Turtle Beach, 14°39.153'S 145°27.042'E, coll. CReefs Lizard Team, 7 Sep 2010; W23949 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W23991 (1), Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard Team, 27 Aug 2010; W23993 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard Team, 11 Sep 2010; W23998 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard Team, 9 Sep 2010.

Comparative material examined. NTM: W23797 (1), W23804 (1), Ambon, Maluku, Indonesia. **ZMA:** *Neanthes gisserana* (Horst, 1924) VPol 0854 (2 syntypes), R/V Siboga Station 172, Gisser anchorage, between this island and Seram-Laut, Maluku, Indonesia, 18 m, coll. 26 Aug 1899.

Diagnosis. *Neanthes* species having transverse brown bar on dorsal surface of chaetiger 4; two notopodial ligules in anterior parapodia; both bar-shaped and conical paragnaths in Area IV (bars are adjacent the jaws), and one row of 4–6 paragnaths in Area III.

Remarks. The specimens examined here are similar to *Neanthes gisserana* and apparently identical with specimens from Ambon described by Pamungkas & Glasby (2015). The present material was compared to the epitokous syntype specimens, and agrees closely at least in terms of features not altered by the epitoky. Thus paragnath numbers and pattern correspond closely, especially the presence of bars adjacent the jaws in Areas IV, which Monro (1939) referred to as the ‘most remarkable character of the species’. Here the species is given a cf. designation because it departs from the type most notably in the paragnath arrangement in Area III, which is 3–4 rows of 16–26 paragnaths across three groups in *N. gisserana*. It may represent a new species.

Unfortunately, photographs of specimen AM W.43844 (field no. 2342) have been misplaced, so an image record of this common species is lacking. Comparative specimens from Ambon, Indonesia (NTM W23797, W23804) have a transverse brown bar on the dorsal surface of chaetiger 4, and other irregular brown mottling on the anterior end. Horst (1924) noted a red-brown buccal segment, blackish pigment on the prostomium and narrow transverse blackish stripes on the anterior part of each segment.

Habitat. Lagoon, fore-reef and reef slope, 1–30 m.

Type locality. Between Gisser and Seram-Laut, Maluku, Indonesia.

Distribution. Eastern Indonesia, Lizard Island.

Neanthes pachychaeta (Fauvel, 1918)

(Fig. 2E)

Ceratonereis pachychaeta Fauvel, 1918: 506–508, fig. 3a–h.

Neanthes pachychaeta.—Glasby *et al.* 2011: 363–374, figs 1–7, 8d (full synonymy).

Material examined. NTM: W22578-T (1), North Point, 14°38.73'S 145°27.2'E, 2 m, coll. C. Watson, N. Bruce & P. Bock, 12 Apr 2008; W22800-T (1), Day Reef, Outer Great Barrier Reef, 14°28.99'S 145°32.78'E, coll. M. Blazewicz-Paskowycz, 19 Feb 2009.

Remarks. This distinctively coloured species (Fig. 2E) was redescribed by Glasby *et al.* (2011), who first reported it from Lizard Island. It is apparently a rare species and was not collected on the August 2013 field trip.

Habitat. Fore-reef and reef slope, 2–10 m.

Type locality. Djibouti and Madagascar.

Distribution. Indo-Pacific.

Nereis Linnaeus, 1758

Nereis Linnaeus, 1758: 654.

Type-species. *Nereis pelagica* Linnaeus, 1758 by original designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin. Eyes present or absent, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with smooth or slightly crenulate cutting edge or with dentate cutting edge. Maxillary ring of pharynx with paragnaths, Oral ring paragnaths present, or absent. Dorsal notopodial ligule present (may be reduced posteriorly). Prechaetal notopodial lobe present or absent. Ventral notopodial ligule present. Acicular process absent. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial prechaetal lobe absent. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers and homogomph falcigers. Neurochaetae dorsally are homogomph spinigers, heterogomph falcigers; blades serrated. Neurochaetae ventrally heterogomph spinigers (may be absent), heterogomph falcigers; blade lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

Nereis sp. cf. *N. cirriseta* Hutchings & Turvey, 1982

(Fig. 2F–H)

Nereis cf. *cirriseta* Hutchings & Turvey, 1982: 119–121, fig. 10a–d.

Material examined. NTM: W22506 (1), Off Casuarina Beach, Lizard Island, 14°40.82' S 145°26.67' E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22522 (1), Big Vicky Reef, NW of Palfrey Island, Lizard Island, 14°S 145°E, coll. K. Mills, 12 Apr 2008; W22523 (1), Day Reef, Outer Great Barrier Reef, 14°28.59'S 145°32.64'E, coll. M. Ekins, 10 Apr 2008; W22540 (1), SW of Palfrey Island, Lizard Island, 14°41.65'S 145°26.49'E, coll. C. Glasby & C. Watson, 8 Apr 2008; W22795 (1), Coconut Beach, Lizard Island, 14°40.88'S 145°28.35'E, coll. C. Watson, 7 Feb 2009.

Diagnosis. *Nereis* species largely unpigmented (Fig. 2F, G); few paragnaths in Area VII–VIII arranged in one line (Fig. 2H); dorsal notopodial ligule slightly smaller than ventral notopodial ligule throughout; notopodial homogomph falcigers with slightly hooked blade with several small teeth basally.

Remarks. These specimens belong to a group of *Nereis* having few paragnaths in Area VII–VIII arranged in one line. Although they resemble closely *N. cirriseta* in regards to the paragnath formulae and form of the homogomph falciger, they differ from this species in having the dorsal notopodial ligule slightly smaller than the ventral notopodial ligule throughout (see Remarks under *N. cf. coutieri* on variability in this feature). Probably a new species. No specimens were collected in August, 2013.

Habitat. Lagoon, fore-reef; in sand, coral rubble and *Halimeda*.

Type locality. Point Peron and Rottneest Island, Western Australia.

***Nereis* sp. cf. *N. coutieri* Gravier, 1899**

(Fig. 3A–C)

Nereis coutieri Gravier, 1899: 237–240, figs 6–11.

Material examined. AM: W.43788, MI QLD 2337 (1); W.43784-T (2), MI QLD 2329; W.43821, MI QLD 2352 (1); W.43828, MI QLD 2337 (1); W.43832-T, MI QLD 2359 (3); W.43823, MI QLD 2354 (4); W.43820-T, MI QLD 2352 (2); W.47560, MI QLD 2335 (1); W.44502, MI QLD 2413 (1); W.47570, MI QLD 2352 (1); W.43797-T, MI QLD 2335 (1). **NTM:** W22570 (1), SW of Palfrey Island, 14°41.65'S 145°24.49'E, coll. M. Ekins, 13 Apr 2008; W23921 (1), Turtle Beach, 14°39.153'S 145°27.042'E, coll. CReefs Lizard 10 Team, 7 Sep 2010; W23937 (1), 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 26 Sep 2010; W23982 (1), 14°16.2954'S 145°18.0929'E, coll. CReefs Lizard 10 Team, 25 Feb 2009.

Diagnosis. *Nereis* species with overall red-brown colour and white spots on dorsum, parapodia and base of postero-dorsal tentacular cirri (white pigment shows green fluorescence at 510–540 nm (Fig 3A–C)); few paragnaths in Area VII–VIII, arranged in one line; dorsal notopodial ligule about 1/2 size of the ventral notopodial ligule; smooth-bladed, distally-pointed notopodial homogomph falcigers.

Remarks. This species belongs to a group of *Nereis* having few paragnaths in Area VII–VIII arranged in one line, and the dorsal notopodial ligule smaller than the ventral notopodial ligule anteriorly, and the dorsal notopodial ligule very reduced posteriorly (note that the size of the dorsal notopodial ligule is size dependent in nereidids, and therefore a difficult character to use to discriminate species – see also account of *N. lizardensis*). Other species in this group are *Nereis heirssonensis*, *N. cirriseta* and *N. bifida*. *Nereis coutieri* differs from these other species in having smooth-bladed, distally-pointed notopodial homogomph falcigers.

Possibly the material from Lizard Island represents a new species as it shows some differences from the type description of *N. coutieri*, including body pigmentation (a broad brown cross on the dorsal surface of chaetiger 2 in the latter, but overall red-brown colour and white spots dorsally in the former), and the dorsal notopodial ligule is about the same size as the ventral notopodial ligule in the type description but about 1/2 size of the ventral notopodial ligule in the present material.

Habitat. Fore-reef and reef slope.

Type locality. Red Sea.

***Nereis lizardensis* Glasby, Wei & Gibb, 2013**

(Fig. 3D–G)

Nereis lizardensis Glasby, Wei & Gibb, 2013: 255–256, figs 4b, 5c, d.

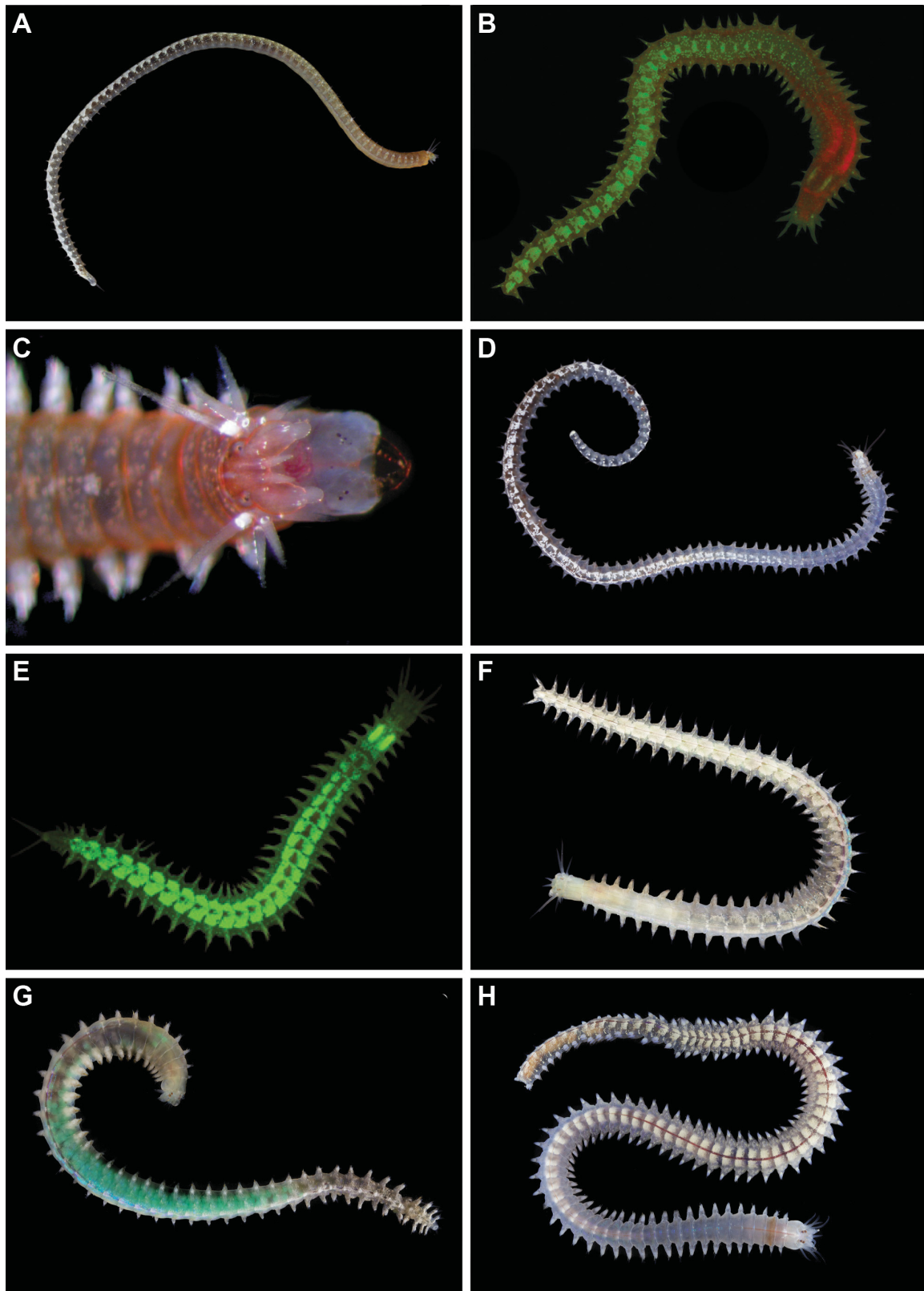


FIGURE 3. A. *Nereis* cf. *coutieri* AM W.43784, alive, lateral view; B. *N.* cf. *coutieri* AM W.43832, alive, fluorescence image at 510–540 nm using DsRed fluorophore barrier filter, dorsal view; C. *N.* cf. *coutieri* NTM W22570, preserved, antero-dorsal view; D. *N. lizardensis* AM W.43798, alive, immature, dorsal view; E. *N. lizardensis* AM W.44498, alive, fluorescence image at 510–540 nm using DsRed fluorophore barrier filter, dorsal view; F. *N. lizardensis* AM W.44506, alive, mature male, dorsal view; G. *N. lizardensis* AM W.44505, alive, mature female, dorsal view; H. *N. trifasciata* AM W.43814, alive, dorsal view. Photo: Alexander Semenov (A, D, F–H). Approximate body widths: A: 0.8 mm; B: 0.7 mm; C: 0.3 mm; D: 0.9 mm; E: 1.0 mm; F: 2.3 mm; G: 2.4 mm; H: 2.0 mm.

Material examined. AM: W.47557, MI QLD 2398 (1); W.45291, MI QLD 2371 (1); W.43817, MI QLD 2352 (1); W.43813, MI QLD 2352 (1); W.43811, MI QLD 2340 (1); W.43778, MI QLD 2329 (3); W.43815-T, MI QLD 2340 (1); W.43786, MI QLD 2329 (5); W.43848, MI QLD 2375 (1); W.45489-T, MI QLD 2437 (3); W.43802-T, MI QLD 2337 (1); W.43805, MI QLD 2344 (1); W.44489-T, MI QLD 2397 (1); W.44319, MI QLD 2392 (1); W.44498-T, MI QLD 2393 (1); W.44506, MI QLD 2399 (1); W.44505, MI QLD 2399 (1); W.43845-T, MI QLD 2377 (1); W.44490-T, MI QLD 2393 (1); W.47547, MI QLD 2399 (1); W.44492, MI QLD 2399 (7); W.47565, MI QLD 2358 (1); W.43835, MI QLD 2340 (1); W.47556, MI QLD 2407 (8); W.47546, MI QLD 2397 (1); W.44869-T, MI QLD 2436 (1); W.45190-T, MI QLD 2446 (2); W.44488, MI QLD 2406 (1); W.43798, MI QLD 2335 (2); W.44499, MI QLD 2397 (1); W.47567, MI QLD 2390 (1). **NTM:** W23914 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 4 Sep 2010; W23930 (1), Turtle Beach, 14°39.1392'S 145°27.072'E, coll. CReefs Lizard 10 Team, 30 Aug 2010; W23932 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 26 Aug 2010; W23952 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W23980 (1), 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 26 Sep 2010; W24007 (1), Washing Machine, 14°23.4078'S 145°16.4616'E, coll. CReefs Lizard 10 Team, 11 Feb 2009; W24020 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard 10 Team, 11 Sep 2010; W24021 (1), Palfrey Island, 14°41.0298'S 145°27.024'E, coll. CReefs Lizard 10 Team, 6 Sep 2010.

Diagnosis. *Nereis* species with abundant white pigment spots on head, postero-dorsally and on pygidium (white pigment spots absent at base of postero-dorsal tentacular cirri; Fig. 3D); white pigment shows green fluorescence at 510–540 nm (Fig. 3E); few paragnaths in Area VII–VIII arranged in one line; notopodia with two ligules (ventral one reduced in size), and notopodial homogomph falcigers with one large lateral tooth and several smaller ones basally.

Remarks. Specimens from the NTM, collected on the CReefs trips, were previously identified as *N. heirissonensis* Augener, 1913; a review of these specimens shows that they are all small forms of *N. lizardensis* that have reduced numbers of paragnaths, especially in Areas III (1–3) and VI (0–3). Although the paragnath count in Areas III and IV would currently place them in *N. heirissonensis*, it appears that paragnath numbers are size related (as they were found to be for *N. denhamensis* by Hutchings & Turvey (1982)), and therefore that they are likely to be small forms of *N. lizardensis*. Unfortunately tissue samples do not exist for the specimens previously identified as *N. heirissonensis* so a DNA comparison must wait for further collecting.

Nereis lizardensis belongs to the *Nereis denhamensis* Augener, 1913 species group, which also includes *Nereis heronensis* (Glasby *et al.* 2013). As described for *N. denhamensis*, the present specimens also showed that juveniles have a reduced dorsal notopodial ligule (half the size of the ventral notopodial ligule), and fewer paragnaths in Area III, which are arranged in a line rather than a patch of two or more rows.

The present specimens show greater variation in epitokal morphological features than has been previously described. Mature male epitokes (e.g., AM W.44506) with slightly enlarged eyes and a pre-natatory region of 14 chaetigers as described by Glasby *et al.* (2013); however, the ventral cirrus lamellae and ventral cirrus lobes of natatory chaetigers described by these authors were not observed in the present specimens (Fig. 3F). Mature female epitoke (AM W.44505) with tightly packed green eggs in the coelom of mid-body segments (Fig. 3G); also in this specimen the epitokal conical postchaetal lamella start on chaetiger 19 rather than on chaetiger 17 in the specimens examined by Glasby *et al.* (2013) and disappear about 10 chaetigers from the pygidium.

Habitat. Lagoon, fore-reef, back-reef and reef slope; associated with coral rubble, sand and *Halimeda*; 1–15 m.

Type locality. Turtle Beach, Lizard Island.

Distribution. Northern Australia, Philippines.

Nereis sp. cf. *N. trifasciata* Grube, 1878

(Figs 3H, 4A, B)

Nereis (*Lycoris*) *trifasciata* Grube, 1878: 74–75.

?*Nereis unifasciata*.—Monro 1931: 13–14. Non Willey, 1905.

Material examined. AM: W.43799, MI QLD 2335 (1); W.43839, MI QLD 2367 (1); W.43814, MI QLD 2344 (1); W.43806, MI QLD 2344 (1); W.43847-T, MI QLD 2375 (2); W.44307-T, MI QLD 2390 (1); W.43816, MI QLD 2344 (1); W.43818, MI QLD 2352 (3); W.43810, MI QLD 2335 (1); W.47592, MI QLD 2390 (2); W.47593, MI QLD 2371 (2); W.44507, MI QLD 2410 (1); W.47541-T, MI QLD 2436 (3); W.45433-T, MI QLD 2406 (1). **NTM:**

W22550 (1), between Casuarina Beach and Palfrey Island, 14°40.92'S 145°26.83'E, coll. C. Glasby, 6 Apr 2008; W22554 (1), Big Vicky Reef, NW of Palfrey Island, 14°S 145°E, coll. E.K. Mills, 12 Apr 2008; W23902 (1), Turtle Beach, 14°39.153'S 145°27.042'E, coll. CReefs Lizard Island 10 Team, 7 Sep 2010; W23903 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard Island 10 Team, 3 Sep 2010; W23998 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard Team, 9 Sep 2010; NTM W22517 (1), SW of Palfrey Island, 14°41.65'S 145°27.93'E, coll. M. Ekins, 13 Apr 2008; NTM W22521 (1), Mermaid Cove, Lizard Island, 14°38.75'S 145°27.21' E, coll. C. Glasby, 6 Apr 2008; NTM W22623 (1), North Direction Island, 14°44.57'S 145°30.85'E, coll. C. Watson, 24 Feb 2009; NTM W22668 (1), Snake Pit, Lizard Island, 14°40.2'S 145°34.09'E, coll. J. Caley & S. Smith, 24 Feb 2009; NTM W22691 (1), Day Reef, 14°28.5'S 145°32.19'E, coll. S. Smith, 22 Feb 2009; NTM W22803 (1), North Direction Island, 14°44.81'S, 145°30.3'E, coll. C. Watson, 24 Feb 2009; NTM W23910 (1), Coconut Beach, 14°40.884'S, 145°28.35' E, coll. C. Watson, 7 Feb 2009; NTM W23970 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard 10 Team, 9 Sep 2010; W23983 (1), 14°44.718' S 145°30.2939' E, coll. CReefs Lizard 10 Team, 26 Sep 2010; NTM W24003 (1), Loomis Beach, 14°41.0298'S, 145°27.024'E, coll. CReefs Lizard 10 Team, 7 Sep 2010.

Diagnosis. *Nereis* species having dark brown band on chaetiger 2 and lighter brown bands on chaetigers 5 or 6 to 10–20; intensity and position of lighter posterior bands variable (Fig. 3H); two notopodial ligules; notopodial homogomph falcigers with relatively long serrated blades in posterior 1/3 to 1/4 of body occurring singly together with homogomph spinigers.

Remarks. The specimens examined here fit the concept of *N. trifasciata* used by other polychaete taxonomists working in the Indo-west Pacific, for example Fauvel (1953) and Wu *et al.* (1985); however, the pigmentation pattern of the Lizard Island specimens differ from that of the type which has three pronounced brown transverse bands on segments 2–4 (hence the specific name). Further, Grube (1878) did not mention the presence of notopodial falcigers, so the current generic assignment of his species is uncertain. The singly occurring notopodial homogomph falcigers in posterior parapodia of the present specimens appear to represent a replacement of one of the spinigers, rather than a *de novo* chaeta. It is an atypical feature for a *Nereis* species and in many respects this species has more in common with a *Neanthes* than a *Nereis*. The specimens examined may represent a new species. *Nereis* cf. *trifasciata* from Lizard Island is very similar to *Neanthes unifasciata* especially in terms of the general body pigmentation and paragnath pattern (Figs 4A, B). The only apparent difference between the two species is that *N. unifasciata* lacks completely notopodial homogomph falcigers. Willey (1905: 271) also remarked on the similarity of the armature between the two species.

Habitat. Fore-reef and back-reef, lagoon, 1–3 m.

Type locality. Bohol, Philippines.

Nereis 'carpentaria' NTM W23986' Glasby

Material examined. AM: W.43824, MI QLD 2354 (2). NTM: W23986 (1), Day Reef, 14°28.7088'S 145°30.8999'E, coll. CReefs Lizard 10 Team, 5 Sep 2010.

Diagnosis. *Nereis* species with irregular brown transverse stripes across anterior dorsum; paragnaths absent in Areas I, II, III, V, VI, small patch present in Areas IV and straight line of paragnaths in Areas VII–VIII; dorsal notopodial ligule absent in anterior chaetigers and present posteriorly as small triangular ligule, about 1/4 to 1/3 size of ventral notopodial ligule; homogomph falcigers strongly bifid, with two smaller teeth present basally.

Remarks. These specimens appear to be a new species, but more material is required for description.

Habitat. Lagoon, patch reef, coral rubble, 4 m.

Nereis 'lizard' NTM W23960' Glasby

(Fig. 4C)

Material examined. AM: W.43850-T, MI QLD 2375 (1); W.47566, MI QLD 2390 (1). NTM: W23924 (1), Day Reef, 14°28.3308'S 145°31.41'E, coll. CReefs Lizard 10 Team, 5 Sep 2010; W23940 (1), Mermaid Cove (buoy), 14°38.7612'S 145°27.2159'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W23960 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard 10 Team, 3 Sep 2010; W23999 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 4 Sep 2010.

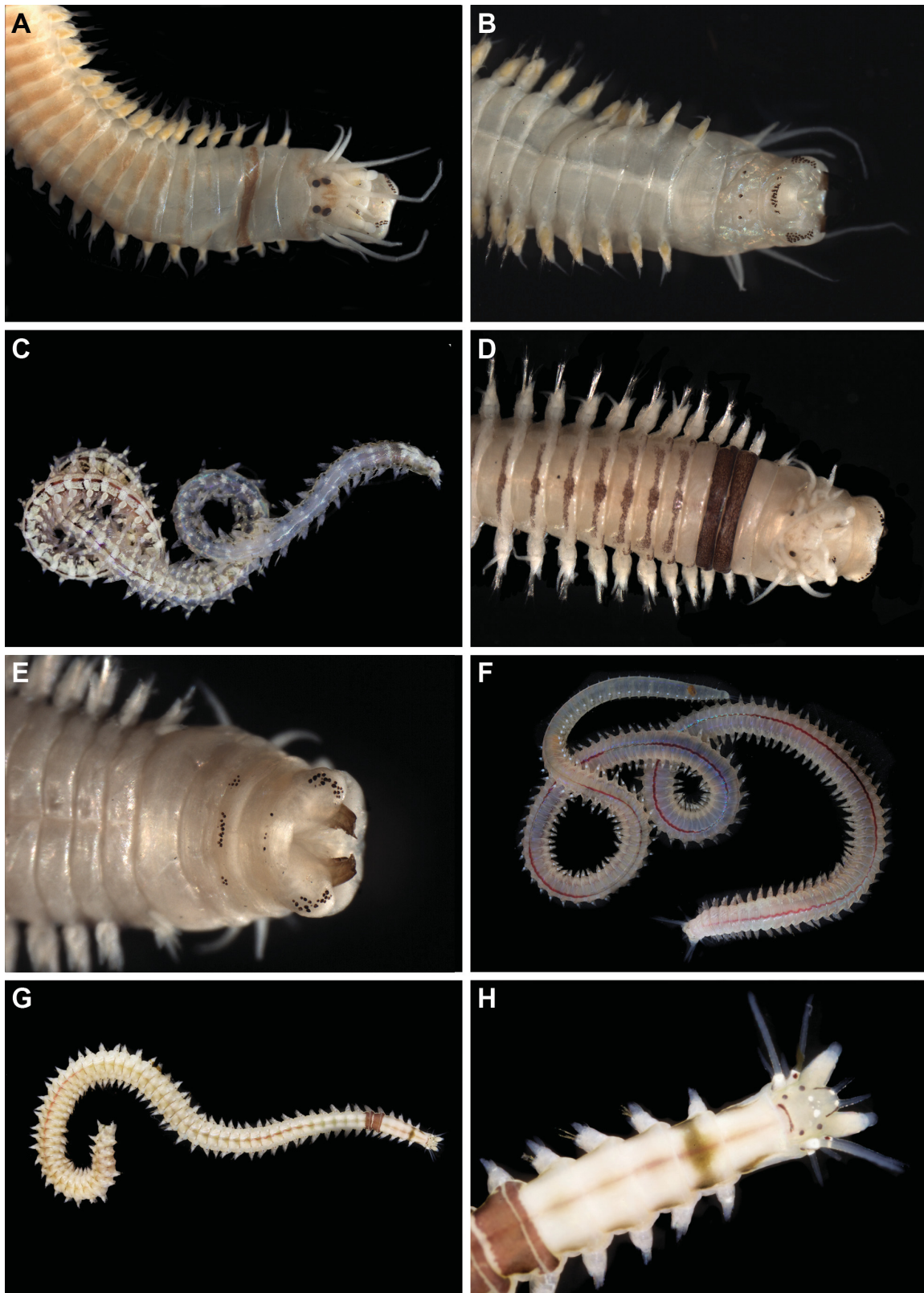


FIGURE 4. A. *Nereis trifasciata* NTM W22730, preserved, antero-dorsal view, pharynx everted; B. *N. trifasciata* NTM W22730, preserved, antero-ventral view, pharynx everted; C. *N. 'lizard'* NTM W23960' AM W.43850, alive, dorsal view; D. *N. 'mixed paragnaths'* NTM W22634' NTM W22634, Heron Island, preserved, antero-dorsal view, pharynx everted; E. *N. 'mixed paragnaths'* NTM W22634' NTM W22634, Heron Island, preserved, antero-ventral view, pharynx everted; F. *Perinereis nuntia* species group AM W.44302, alive, dorsal view; G. *P. pictilis* AM W.43803, alive, dorsal view; H. *P. pictilis* alive, close up of AM W.43803, antero-dorsal view. Photo: Alexander Semenov (C, F–H). Approximate body widths: A, B: 2.2 mm; C: 1.0 mm; D, E: 1.7 mm; F: 3.0 mm; G, H: 2.1 mm.

Diagnosis. *Nereis* species lacking pigmentation (apart from prominent glandular areas dorsally and on notopodia, and white granular pigment (in living forms)); elongate body, flattened posteriorly (Fig. 4C); two notopodial ligules; both homogomph spinigers and falcigers (with serrated blades) in notopodia of posterior chaetigers.

Remarks. The material probably represents a new species similar to *Nereis trifasciata*.

Habitat. Lagoon to reef slope, associated with patch reefs in lagoon, and *Halimeda*.

Nereis ‘mixed *paragnaths*’ NTM W22634’ Glasby

(Fig. 4D, E)

Material examined. NTM: W22738 (1), Waining Reef, 14°27.08'S 145°18.83'E, coll. C. Watson, 15 Feb 2009; W23906 (1), High Rock, 14°49.5108'S 145°33.096'E, coll. CReefs Lizard 10 Team, 6 Sep 2010; W23907 (1), High Rock, 14°49.56'S 145°33.1319'E, coll. CReefs Lizard 10 Team, 11 Sep 2010; W23941 (1), North Direction Island, 14°44.718'S 145°30.2939'E, coll. CReefs Lizard 10 Team, 4 Sep 2010; W23943 (1), Day Reef, 14°28.3308'S 145°31.41'E, coll. CReefs Lizard 10 Team, 5 Sep 2010; W23951 (1), MacGillivray Reef, 14°38.8751'S 145°29.196'E, coll. CReefs Lizard 10 Team, 31 Aug 2010; W23955 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard 10 Team, 3 Sep 2010; W23971 (1), Mermaid Cove (buoy), 14°38.7612'S 145°27.2159'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W23977 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W23981 (1), Bommie Bay, 14°39.687'S 145°28.32'E, coll. CReefs Lizard 10 Team, 12 Sep 2010.

Diagnosis. *Nereis* species having two dark brown dorsal bands on chaetigers 1 and 2, and from chaetigers 4–10 light brown broken bands (Fig. 4D); paragnaths include mixture of large and small cones (hence the informal name), with Areas VII–VIII having about 25–30 paragnaths arranged in 1 or 2 broken lines, and divided into three groups (Fig. 4D, E); two notopodial ligules and homogomph falcigers with short, straight, smooth blades.

Remarks. An informal taxon name is introduced for this species, which superficially resembles a *Ceratonereis* species in terms of pigmentation pattern. Morphologically it is closest to species like *Nereis coutieri* and *N. cirriseta*. Full description of the species, including a decision on whether it is new or not must await a molecular study.

Habitat. Lagoon to reef slope, associated with patch reefs in lagoon, and *Halimeda*, 2–20 m.

Perinereis Kinberg, 1865

Perinereis Kinberg, 1865: 175.

Type-species. *Perinereis novaehollandiae* Kinberg, 1865 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with smooth or slightly crenulate cutting edge or with dentate cutting edge. Maxillary ring of pharynx with paragnaths, Oral ring paragnaths present. Dorsal notopodial ligule present. Prechaetal notopodial lobe present or absent. Ventral notopodial ligule present. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial prechaetal lobe absent. Neuropodial postchaetal lobe absent or present. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciaculae absent from segments 1 and 2. Notochaetae are homogomph spinigers. Neurochaetae dorsally are homogomph spinigers, heterogomph falcigers; blades serrated. Neurochaetae ventrally heterogomph spinigers (may be absent), heterogomph falcigers; blade lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

Perinereis helleri (Grube, 1878)

Nereis (*Perinereis*) *helleri* Grube, 1878: 81–82.

Perinereis camiguina Grube, 1878: 87, pl. 4, fig. 8.

Perinereis camiguina.—Augener 1922: 21–23; Monro 1931:15–16, fig. 9.

Perinereis helleri.—Monro 1931:14, fig. 8a–c; Hutchings *et al.* 1991, 254–255: fig. 9a–c; Pamungkas & Glasby 2015: 15–17, fig. 6a, b.

Material examined. NTM: W22503-T (1), Off Casuarina Beach, 14°40.82'S, 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22544-T (1), between Casuarina Beach and Palfrey Island, 14°40.92'S, 145°26.83'E, coll. C. Glasby, 6 Apr 2008; W23898 (1), Day Reef, 14°28.3308'S, 145°31.41'E, coll. CReefs Lizard 10 Team, 5 Sep 2010.

Remarks. Specimens of this species were not collected in the August 2013 survey, and general low numbers collected in previous surveys suggest that the species is rare. The species was first reported from Lizard Island by Hutchings *et al.* (1991).

Habitat. Lagoon to reef slope, associated with patch reefs in lagoon.

Type locality. Bohol, Philippines.

Distribution. North, north-east and east Australia. Indo-west Pacific, Chile.

***Perinereis nigropunctata* (Horst, 1889)**

Nereis nigro-punctata Horst, 1889: 171, pl. 8, figs 1–3.

Nereis (*Perinereis*) *yorkensis* Augener, 1922: 24–27, figs 6, 6a–e.

Perinereis nigropunctata.—Monro 1931:16; Hutchings *et al.* 1991: 256–257, fig. 10a–e; Pamungkas & Glasby 2015: 18, fig. 6c, d.

Material examined. None.

Remarks. No specimens have been collected in recent surveys. The only record of this species from Lizard Island is AM W.202564, containing four specimens reported by Hutchings *et al.* (1991). These authors confirmed the synonymy with *Nereis* (*Perinereis*) *yorkensis*, which was originally described from Cape York.

Type locality. Malaysia.

Distribution. Northern Australia. Indo-West Pacific.

***Perinereis nuntia* (Savigny, 1818) species group Wilson & Glasby, 1993** (Fig. 4F)

Lycoris nuntia Savigny, 1818: 313.

Perinereis nuntia species group Wilson & Glasby, 1993: 259.

Material examined. AM: W.44302-T, MI QLD 2391 (1); W.44311-T, MI QLD 2391 (5). **NTM:** W22580-T (1), Casuarina Beach, 14°40.8'S 145°26.84'E, coll. C. Glasby, 12 Apr 2008.

Remarks. The present specimens are typical of the species group in lacking pigmentation (Fig. 4F). They do not correspond to any known species in the group (Wilson & Glasby 1993; Glasby & Hsieh 2006; Yousefi *et al.* 2011). This material belongs to the subgroup of *Perinereis nuntia* species group that lack heterogomph spinigers in the neuropodia of anterior chaetigers; the heterogomph spinigers first appear from chaetigers 18–42 and, in small specimens, are absent altogether.

Habitat. In sand around beach rock; intertidal.

Distribution. Indo-West Pacific, Red Sea.

***Perinereis obfuscata* (Grube, 1878)**

Nereis (*Perinereis*) *obfuscata* Grube, 1878: 86–87.

Perinereis obfuscata.—Monro 1931:16–18, figs 10a–d; Hutchings *et al.* 1991: 257–258, fig. 11a–c.

Material examined. AM: W.47559, MI QLD 2413 (1). **NTM:** W22662 (1), North Direction Island, 14°44.81'S 145°30.3'E, coll. C. Watson, 24 Feb 2009; W23931 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard 10 Team, 3 Sep 2010; W24006 (1), Linnet Reef, 14°46.8198'S 145°20.358'E, coll. CReefs Lizard 10 Team, 30 Aug 2010.

Remarks. The present specimens are typical of the species. First reported from Lizard Island by Hutchings *et al.* (1991).

Habitat. Reef flat to reef slope, in sand between reef patches.

Type locality. Philippines.

Distribution. Northern Australia, Philippines.

***Perinereis pictilis* Glasby, Wei & Gibb, 2013**

(Fig. 4G, H)

Perinereis pictilis Glasby, Wei & Gibb, 2013: 256–257, fig. 6a.

Material examined. AM: W.43808, MI QLD 2352 (1); W.43803-T, MI QLD 2331 (1); W.43787, MI QLD 2331 (1); W.43833-T, MI QLD 2359 (3); W.43843-T, MI QLD 2359 (1); W.47549, MI QLD 2423 (2); W.47568, MI QLD 2413 (2); W.47555, MI QLD 2413 (1); W.43822, MI QLD 2358 (1); W.47572, MI QLD 2354 (1); W.43812, MI QLD 2337 (1); W.47569, MI QLD 2371 (1); W.44809-T, MI QLD 2424 (1). **NTM:** no new material.

Remarks. This species was described in 2013, and no new material from NTM exists. It is a cryptic species closely allied to *Perinereis suluana* (Horst), but distinguishable from this species by the distinctive colour pattern (Fig. 4G, H). The present specimens are not sexually mature, so the metamorphosed (epitokous) form is still unknown.

Habitat. Lagoon to reef slope, associated with patch reefs in lagoon, and *Halimeda* and seagrass, 2–30 m.

Type locality. Lizard Island, Great Barrier Reef.

Distribution. Lizard Island, Fiji.

***Perinereis singaporiensis* (Grube, 1878)**

(Fig. 5A)

Nereis (*Perinereis*) *singaporiensis* Grube, 1878: 84–85.

Perinereis singaporiensis.—Hutchings *et al.* 1991: 262–263, fig. 15a–e.

Material examined. NTM: W22581-T (1), Mangrove Beach, 14°40.79'S 145°27.74'E, coll. M. Blazewicz-Paskowycz, 12 Apr 2008.

Remarks. This species is common in northern Australia and SE Asia, but rare on Great Barrier Reef.

Habitat. Lagoon patch reefs, 12 m.

Type locality. Singapore.

Distribution. Northern Australia, Indo-west Pacific. First record for Lizard Island.

***Perinereis suluana* (Horst, 1924)**

Nereis (*Perinereis*) *suluana* Horst, 1924: 175, pl. 33, fig. 9.

Perinereis suluana.—Hutchings *et al.* 1991: 263–265; Glasby *et al.* 2013: 258–259, fig. 6b.

Material examined. AM: W.47543-T, MI QLD 2423 (1); W.47571, MI QLD 2390 (1). **NTM:** W22644 (1), Yonge Reef, 14°36.94'S, 145°37.17'E, coll. M. Blazewicz-Paskowycz, 18 Feb 2009.

Remarks. The August 2013 survey specimens yielded the first record of this species from Lizard Island.

Habitat. Reef slope, 8 m.

Type locality. Sulu Islands, Philippines.

Distribution. Indo-west Pacific. First record for Lizard Island.

***Perinereis vancaurica* (Ehlers, 1868)**

Nereis vancaurica Ehlers, 1868: xx (preface).

Nereis (*Perinereis*) *nancaurica*.—Augener 1922: 23–24.

Perinereis nancaurica.—Monro 1931: 14.

Perinereis vancaurica.—Hutchings *et al.* 1991: 265–266, fig. 17a–h.

Material examined. None.

Remarks. Although the species has yet to be reported from Lizard Island, NTM and AM database records from nearby coastal areas, as well as literature records from the nearby Low Islands (Monro 1931) indicate that the species is likely to occur here.

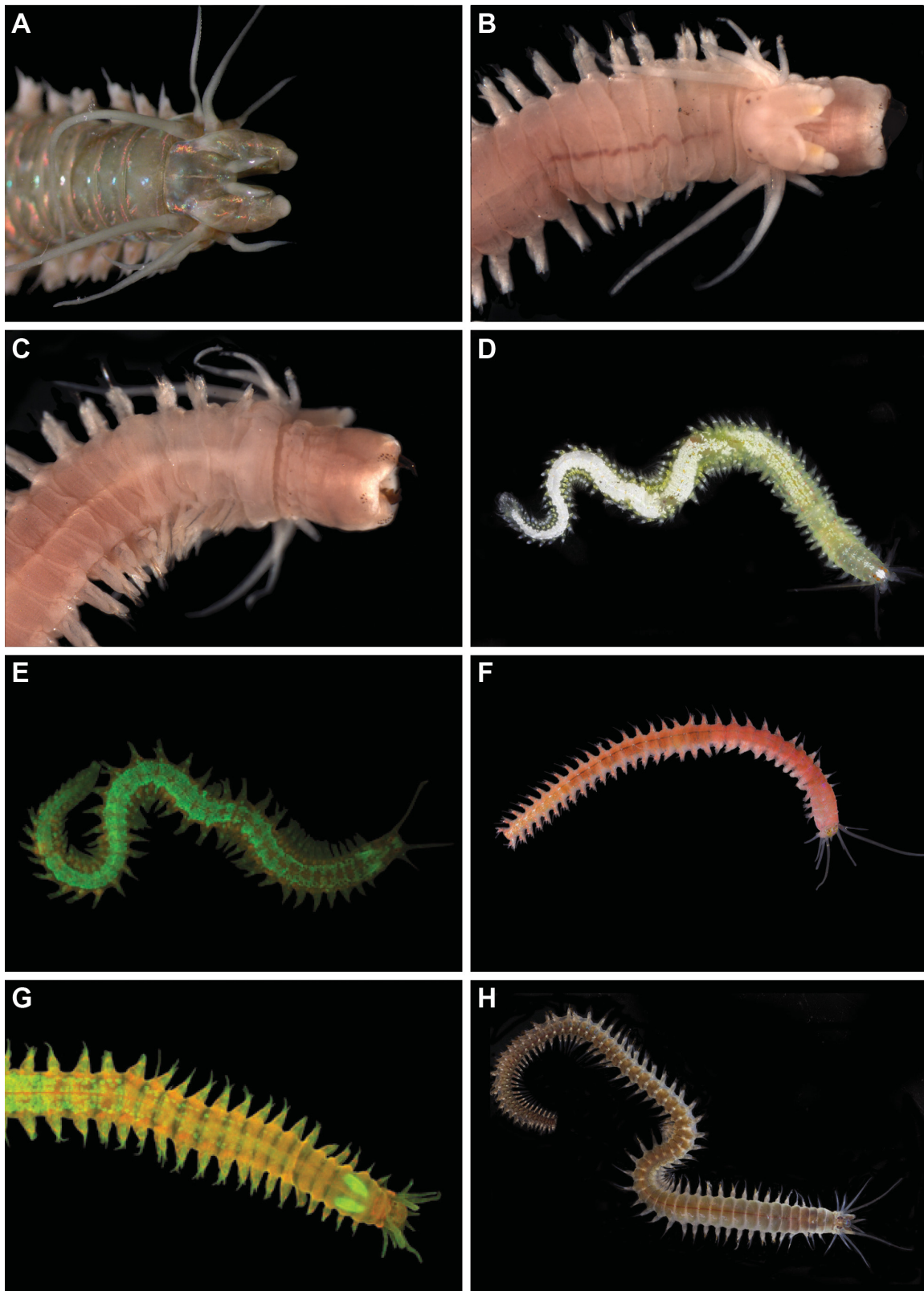


FIGURE 5. A. *Perinereis singaporiensis* NTM W22581, alive, antero-dorsal view; B. *P. 'pale'* NTM W22527, preserved, antero-dorsal view, pharynx everted; C. *P. 'pale'* NTM W22527, preserved, antero-ventral view, pharynx everted; D. *Platynereis polyscalma* AM W.44306, alive, immature, dorsal view; E. *P. polyscalma* AM W.43836, alive, fluorescence image at 510–540 nm using DsRed fluorophore barrier filter, dorsal view; F. *P. uniseris* AM W.43800; alive, dorsal view; G. *P. uniseris* AM W.44500, alive, fluorescence image at 510–540 nm using DsRed fluorophore barrier filter, dorsal view; H. *Pseudonereis anomala* AM W.43819; alive, dorsal view. Photo: Alexander Semenov (D, F, H). Approximate body widths: A: 3.5 mm; B, C: 1.4 mm; D: 1.0 mm; E: 0.9 mm; F: 1.0 mm; G: 0.9 mm; H: 1.4 mm.

Type locality. Nancauri, Nicobar Islands.

Distribution. Australia, Indo-West Pacific.

***Perinereis* 'pale_NTM W22527' Glasby**

(Fig. 5B, C)

Material examined. NTM: W22527 (1), between Casuarina Beach and Palfrey Island, 14°40.92'S 145°26.83'E, coll. C. Glasby, 6 Apr 2008.

Diagnosis. Member of *Perinereis nuntia* group having 6 small paragnaths in Areas VII–VIII arranged in single line, and relatively few paragnaths on maxillary ring (Fig. 5B, C).

Remarks. The number of paragnaths in Areas VII–VIII is less than that for any other species in the *P. nuntia* species group (Wilson & Glasby, 1993). The species will be formally described provided further specimens are collected.

Habitat. Back reef in coarse coral rubble, 1 m.

***Platynereis* Kinberg, 1865**

Platynereis Kinberg, 1865: 177.

Type-species. *Platynereis magalhaensis* Kinberg, 1865 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present, palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths; pectinate rows. Oral ring paragnaths present; pectinate rows. Dorsal notopodial ligule present. Prechaetal notopodial lobe present. Ventral notopodial ligule present. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers present, homogomph falcigers (may be absent); terminal tendon present with articulation fused on some segments. Neurochaetae dorsally homogomph spinigers, heterogomph falcigers; blades having teeth only slightly longer proximally than distally. Neurochaetae ventrally are heterogomph spinigers, heterogomph falcigers; blades of lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

***Platynereis polyscalma* Chamberlin, 1919**

(Fig. 5D, E)

Platynereis polyscalma Chamberlin, 1919: 219–226, pl. 30, figs 5–8, pl. 31, figs 1–10, pl. 32, figs 1–2.

Platynereis polyscalma.—Monro 1931:18; Hutchings & Reid 1991: 56–57.

Material examined. AM: W.43785, MI QLD 2329 (1); W.45490-T, MI QLD 2443 (1); W.44306, MI QLD 2380 (1); W.43836, MI QLD 2340 (2); W.44303, MI QLD 2375 (1); W.45016-T, MI QLD 2443 (1); W.45314-T, MI QLD 2387 (2); W.45493-T, MI QLD 2442 (1). **NTM:** W22536 (1), NW side of Palfrey Island, 14°41.4'S 145°26.58'E, coll. C. Glasby, C. Watson & M. Blazewicz, 10 Apr 2008; W22617-T (1), Yonge Reef (inside) Outer Barrier, 14°21.76'S 145°22.33'E, coll. C. Watson, 18 Feb 2009; W22740 (1), 14°23.41'S 145°16.42'E, coll. M. Timmers, 12 Feb 2009; W23979 (1), north end of Mrs Watsons Bay, 14°39.3156'S 145°26.788'E, coll. CReefs Lizard 09 Team, 6 Feb 2009.

Diagnosis. *Platynereis* species having green pigmentation and abundant white pigment spots on dorsum and characteristic patch of white pigment on prostomium (Fig. 5D); pigment shows green fluorescence at 510–540 nm (Fig. 5E).

Remarks. This species was first reported from Lizard Island by Hutchings & Reid (1991). The present specimens fit the description of these authors; the only additional variation noted is that the pectinate rows of paragnaths in Areas VII–VIII can be arranged in 5–6 patches, rather than only 5 patches.

Habitat. Lagoon and back reefs, sand, 2–10 m.

Type locality. Ellice Islands (Funafuti) and Gilbert Islands.

Distribution. Northern Australia, tropical Indo-West Pacific.

***Platynereis uniseris* Hutchings & Reid, 1991**

(Fig. 5F, G)

Platynereis uniseris Hutchings & Reid, 1991: 57–59, fig. 3a–j.

Material examined. AM: W.43830, MI QLD 2358 (1); W.44494, MI QLD 2399 (1); W.43800, MI QLD 2331 (1); W.44500, MI QLD 2393 (1); W.44495, MI QLD 2399 (1); W.47548, MI QLD 2399 (3); W.44491, MI QLD 2446 (1); W.44509, MI QLD 2398 (1). **NTM:** W22505-T (1), off Casuarina Beach, 14°40.82'S 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22529 (1), entrance to lagoon, 14°41.22'S 145°27.93'E, coll. C. Watson, 4 Apr 2008; W22531 (1), North Point, 14°38.73'S 145°27.2'E, coll. C. Watson, N. Bruce & P. Bock, 12 Apr 2008; W22537 (1), Coconut Beach, 14°41.47'S 145°28.18'E, coll. C. Watson, 5 Apr 2008; W22579-T (1), entrance to lagoon, 14°41.22'S 145°27.93' E, coll. C. Watson, 4 Apr 2008; W23976 (1), Turtle Beach, 14°39.1392'S 145°27.072'E, coll. CReefs Lizard 10 Team, 30 Aug 2010; W23987 (1), Day Reef, 14°28.3308'S 145°31.41'E, coll. CReefs Lizard 10 Team, 5 Sep 2010.

Diagnosis. *Platynereis* species pink in colour (Fig. 5F) and showing less intense fluorescence pattern under green light (510–540 nm) compared to *P. polyscalma* (Fig. 5G); lacking white prostomial pigment patch of latter species (Fig. 5D).

Remarks. This species was first reported from Lizard Island by Hutchings & Reid (1991). The present specimens fit the description of these authors; the only additional variation noted is that the longest tentacular cirri extend to about chaetiger 12.

Habitat. Lagoon to reef slope, sand and coral rubble, 2 m.

Type locality. Ningaloo, Western Australia.

Distribution. Northern Australia.

***Pseudonereis* Kinberg, 1865**

Pseudonereis Kinberg, 1865: 174.

Type-species. *Pseudonereis gallapagensis* Kinberg, 1865 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment, greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths, cones. Oral ring paragnaths present, cones and p-bars. Dorsal notopodial ligule present. Prechaetal notopodial lobe present or absent. Ventral notopodial ligule present. Acicular process absent. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial prechaetal lobe absent. Neuropodial postchaetal lobe absent or present. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers, homogomph falcigers (may be absent). Neurochaetae dorsally heterogomph spinigers (may be absent), homogomph spinigers (may be absent), heterogomph falcigers; blades serrated. Neurochaetae ventrally heterogomph spinigers, heterogomph falcigers; blade lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

***Pseudonereis anomala* Gravier, 1901**

(Fig. 5H)

Pseudonereis anomala Gravier, 1901: 191–197, pl. 12, figs 50–52, text figs 194–202.

Pseudonereis anomala.—Bakken 2007: 148–152, figs 2, 3; Glasby, Wei & Gibb 2013: 259, figs 6a, 7a, b.

Material examined. AM: W.43819, MI QLD 2352 (2); W.43809, MI QLD 2352 (1); W.47595, MI QLD 2352 (1).

NTM: no new material.

Remarks. This species was recently redescribed by Glasby *et al.* (2013). The present material yielded no new character information. *Pseudonereis anomala* and its cryptic counterpart, *P. anomalopsis* both co-occur on Lizard Island, but appear to occupy different niches: *P. anomala* is confined to the lagoon and inshore reefs whereas *P. anomalopsis* has been reported only on the Outer Barrier Reef.

Habitat. Lagoon and fore-reef, 2–12 m.

Type locality. Djibouti.

Distribution. Australia, Indo-west Pacific, Red Sea, Gulf of Aden, Persian Gulf, Arabian Sea. First record for Lizard Island.

***Pseudonereis anomalopsis* Glasby, Wei & Gibb, 2013**

Pseudonereis anomalopsis Glasby, Wei & Gibb, 2013: 259–261, fig. 7c, d.

Material examined. AM, NTM: no new material.

Remarks. *Pseudonereis anomalopsis* is a cryptic species closely allied to *P. anomala* Gravier, 1901.

Habitat. Outer Barrier reefs only (Day and Hicks Reef). Fore-reef only, coarse rubble, 10–18 m.

Type locality. Hicks Reef, Outer Barrier from Lizard Island, Great Barrier Reef.

Distribution. Known only from Lizard Island.

***Simplisetia* Hartmann-Schröder, 1985**

Ceratonereis (Simplisetia) Hartmann-Schröder, 1985: 48.

Simplisetia Khlebovich, 1996: 121.

Type-species. *Ceratonereis aequisetis* Augener, 1913 by subsequent designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove present; palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths. Oral ring paragnaths and papillae absent. Dorsal notopodial ligule present. Prechaetal notopodial lobe present or absent. Ventral notopodial ligule present. Acicular process present or absent. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial postchaetal lobe absent or present. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers. Neurochaetae dorsally are fascicle heterogomph spinigers (may be absent), homogomph spinigers, heterogomph falcigers. Neurochaetae ventrally are heterogomph spinigers, homogomph spinigers (may be absent), heterogomph falcigers; blades lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

***Simplisetia erythraeensis* (Fauvel, 1919)**

Ceratoneries erythraeensis Fauvel, 1919: 407–410, pl. 16, figs 26–30, 42–47.

Material examined. AM: W.44501, MI QLD 2413 (1); W.45290, MI QLD 2390 (1). NTM: no new material.

Remarks. The present specimens fit well the type description of this species. Australian Museum database records indicate that this species is widespread across northern Australia. AM W.44501 is a sexually mature specimen showing enlarged eyes and paragnath deformation.

Type locality. Djibouti, Red Sea and Madagascar.

Distribution. Western Indian Ocean, Red Sea, East Asia, Japan. First record for Lizard Island.

***Simplisetia lizardensis* (Ben-Eliahu, Hutchings & Glasby, 1984)**

Ceratonereis lizardensis Ben-Eliahu, Hutchings & Glasby, 1984: 91–93, fig. 1a–g.

Material examined. AM, NTM: no new material.

Remarks. This species has not been found since the original discovery in 1983 by P. Hutchings and description the following year (Ben-Eliahu *et al.* 1984). It appears to be restricted to Ferrier's Creek, which was not sampled in recent surveys.

Type locality. Ferrier's Creek, Lizard Island, Great Barrier Reef.

Distribution. Known only from Lizard Island.

Solomonereis Gibbs, 1971

Solomonereis Gibbs, 1971: 151.

Type-species. *Solomononereis merauensis* Gibbs, 1971 by original designation.

Diagnosis. Frontal antennae present, 1 pair. Prostomium with anterior margin indented. Eyes present, 2 pairs. One apodous anterior segment. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx with paragnaths, rod-like. Oral ring paragnaths and papillae absent. Dorsal notopodial ligule present. Prechaetal notopodial lobe absent. Ventral notopodial ligule present. Acicular process absent. Dorsal cirri single. Neuropodial postchaetal lobe absent. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae present on segments 1 and 2. Notochaetae are sesquigomph spinigers, homogomph falcigers; terminal tendon absent. Neurochaetae dorsally sesquigomph spinigers, heterogomph falcigers; blades serrated. Neurochaetae ventrally heterogomph spinigers.

Solomononereis 'silver_gut_NTM W18461' Glasby (Fig. 6A)

Material examined. AM: W.44318, MI QLD 2392 (1); W.43838, MI QLD 2367 (1); W.43849-T, MI QLD 2375 (2); W.47591, MI QLD 2398 (2); W.45176-T, MI QLD 2330 (1). **NTM:** W22526-T (1), between Casuarina Beach and Palfrey Island, Lizard Island, 14°40.92'S 145°26.83'E, coll. C. Glasby, 6 Apr 2008; W23897 (1), Coconut Beach, 14°41.052'S 145°28.1999'E, coll. CReefs Lizard 10 team, 25 Aug 2010.

Diagnosis. Slender, elongate member of *Solomononereis* (Fig. 6A) having only 6 groups of paragnaths on maxillary ring (type species, *S. marauensis*, has 8 groups); mid-body dorsal cirri about 4 x length of dorsal notopodial ligule; although reduced in size posteriorly, dorsal notopodial ligule does not disappear in posterior chaetigers like in other species of genus.

Habitat. Back reef, intertidal to 1 m, coarse coral rubble.

Websterinereis Pettibone, 1971

Websterinereis Pettibone, 1971: 19–20.

Type-species. *Nereis tridentata* Pettibone, 1971, by original designation.

Diagnosis. Frontal antennae present, 1 pair. Palpophore with transverse groove; palpostyles conical. Prostomium with entire anterior margin. Eyes present, 2 pairs. One apodous anterior segment, equal to or less than length of chaetiger 1 or greater than length of chaetiger 1. Tentacular cirri with distinct cirrophores. Jaws with dentate cutting edge. Maxillary ring of pharynx without paragnaths or papillae. Oral ring papillae present. Dorsal notopodial ligule present. Acicular process absent. Ventral notopodial ligule present. Dorsal cirrus simple, lacking basal cirrophore. Neuropodial postchaetal lobe present, at least on some anterior chaetigers. Ventral neuropodial ligule of anterior chaetigers present. Ventral cirri single. Notoaciculae absent from segments 1 and 2. Notochaetae are homogomph spinigers. Neuropodial dorsally heterogomph falcigers; blades serrated; fused falcigers present or absent. Neurochaetae ventrally heterogomph spinigers, heterogomph falcigers; blade lacking distinct tendon on terminal tooth. Anal cirri cirriform or conical.

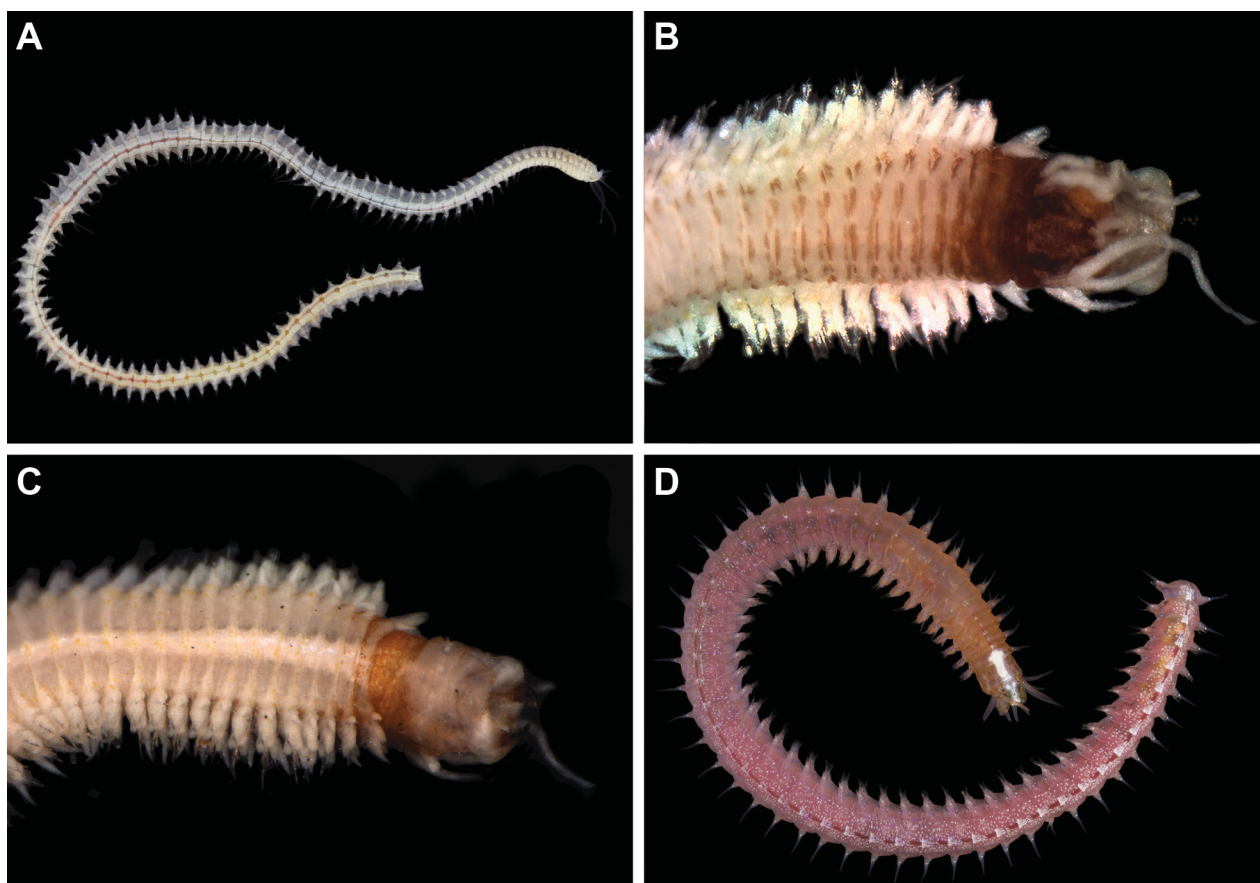


FIGURE 6. A. *Solomononereis* 'silver_gut_NTM W18461' AM W.43849, alive, dorsal view; B. *Websterinereis foli* NTM W22621, preserved, antero-dorsal view, pharynx everted; C. *W. foli* NTM W22621, preserved, antero-ventral view, pharynx everted; D. Nereididae, undetermined, alive, mature male, dorsal view. Photo: Alexander Semenov (A, D). Approximate body widths: A: 1.0 mm; B, C: 0.5 mm; D: unknown.

***Websterinereis foli* (Fauvel, 1930)**

(Fig. 6B, C)

Leptonereis foli Fauvel, 1930: 520, fig. 3.

Websterinereis foli.—Pettibone 1971: 23–25, figs 10, 11.

Nicon sp.—Martens *et al.* 1995: 17, figs 20–24.

Material examined. AM: W.47558, MI QLD 2352 (1); W.47564, MI QLD 2354 (3); W.45315-T, MI QLD 2410 (1); W.45140-T, MI QLD 2435 (2). **NTM:** W22499-T (1), off Casuarina Beach, 14°40.82'S 145°26.67'E, coll. P. Brock & N. Bruce, 15 Apr 2008; W22524 (1), between Casuarina Beach & Palfrey Island, 14°40.92'S 145°26.83'E, coll. C. Glasby, 6 Apr 2008; W22533 (1), lagoon entrance, 14°41.34'S 145°28.2'E, coll. M. Blazewicz & N. Bruce, 11 Apr 2008; W22534 (1), North Point, 14°38.73'S 145°27.2'E, coll. C. Watson, N. Bruce & P. Bock, 12 Apr 2008; W22535-T (1), SW of Palfrey Island, 14°41.65'S 145°26.49'E, coll. C. Glasby & C. Watson, 08 Apr 2008; W22620-T (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz, 13 Feb 2009; W22621-T (1), Yonge Reef (inside) Outer Barrier, 14°21.76'S 145°22.33'E, coll. C. Watson, 18 Feb 2009; W22626-T (1), Day Reef, 14°28.27'S 145°37.78'E, coll. M. Blazewicz-Paskowycz; 13 Feb 2009; W22703 (1), Yonge Reef (inside) Outer Barrier, 14°21.76'S 145°22.33'E, coll. C. Watson, 18 Feb 2009; W22755 (1), North Direction Island, 14°44.81'S 145°30.3'E, coll. C. Watson, 24 Feb 2009; W23896 (1), North Point, 14°38.67'S 145°27.276'E, coll. CReefs Lizard 10 Team, 31 Aug 2010; W23908 (1), MacGillivray Reef, 14°38.85'S 145°29.2739'E, coll. CReefs Lizard 10 Team, 3 Sep 2010; W23909 (1), Loomis Beach, 14°41.0298'S 145°27.024'E, coll. CReefs Lizard 10 Team, 7 Sep 2010; W23913 (1), Turtle Beach, 14°39.1392'S 145°27.072'E, coll. CReefs Lizard 10 Team, 30 Aug

2010; W23915 (1), north end of Mrs Watsons Bay, 14°39.3156'S 145°26.788'E, CReefs Lizard 09 Team, 6 Feb 2009; W23917 (1), Ghost Beach, 14°41.9952'S 145°27.096'E, coll. CReefs Lizard 10 Team, 28 Aug 2010; W23945 (1), Mrs Watson's Bay, 14°39.4332'S 145°27.042'E, coll. CReefs Lizard 10 Team, 27 Aug 2010; W23954 (1), Bommie Bay, 14°39.5898'S 145°28.272'E, coll. CReefs Lizard 10 Team, 9 Sep 2010; W23985 (1), Lizard Island, 14°16.2954'S 145°18.0929'E, coll. CReefs Lizard 10 Team, 25 Feb 2009; W24000 (1), MacGillivray Reef (mooring), 14°38.9442'S 145°29.2139'E, coll. CReefs Lizard 10 Team, 12 Sep 2010.

Remarks. The present specimens fit well the type description. *Websterinereis foli* resembles *Leonnates nipponicus* in pigmentation pattern and presence of papillae on the oral ring of the pharynx (Fig. 6B, C). It differs in that it is a very small, slender species, and lacks paragnaths on the maxillary ring.

Habitat. Back reef, lagoon patch reef, fore reef and reef slope; coral rubble and *Halimeda*, 2–10 m.

Type locality. Ile de Pins, New Caledonia.

Distribution. Indo-Pacific, coral reefs only. First record for Lizard Island.

Nereididae, undetermined

(Fig. 6D)

Material examined. None.

Image data. Field ID: *Platynereis* sp. Collecting event MI QLD 2413. Image 0446–0450 of Alexander Semenov.

Remarks. Unfortunately the specimen photographed was misplaced, so that at present this distinctively pigmented species is only known by image records.

Key to Nereididae of Lizard Island

1. Frontal antennae absent. *Micronereis bansei*
- Frontal antennae present 2
2. (1) Parapodia sub-biramous (notopodia strongly reduced, lacking ligules); three pairs of tentacular cirri *Namanereis amboinensis*
- Parapodia sub-biramous (notopodia strongly reduced, lacking ligules); four pairs of tentacular cirri *Namalycastis abiuma* species group
- Parapodia biramous (notopodia represented by at least one distinct ligule or lobe); four pairs of tentacular cirri. 3
3. (2) Pharynx bearing only minute papillae. *Websterinereis foli*
- Pharynx bearing papillae (on oral ring) and paragnaths (maxillary ring). *Leonnates* 4
- Pharynx bearing only paragnaths (may be in both rings or maxillary ring only). 5
4. (3) Notopodial homogomph falcigers absent; uniform, dark brown pigmentation antero-dorsally including prostomium. *Leonnates nipponicus*
- Notopodial homogomph falcigers present; pigmentation not uniform (longitudinal stripes on mid-prostomium; transverse stripe on posterior prostomium) *Leonnates crosnieri*
5. (3) Anterior margin of prostomium shallowly cleft; distinctive yellowish glands at the base of dorsal cirri in anterior chaetigers *Solomononereis 'silver_gut_NTM W18461*
- Anterior margin of prostomium deeply cleft or indented; glands absent 6
- Anterior margin of prostomium not cleft; glands absent 10
6. (5) Paragnaths rod-like, arranged in 8 groups on the maxillary ring (Area III with three groups). *Ceratonereis japonica*
- Paragnaths conical, arranged in groups by Area (Area III with single group) 7
7. (6) Paragnath numbers in Area III greater than in Area IV; irregular transverse brown stripes on anterior dorsum *Ceratonereis perkinsi*
- Paragnath numbers in Area III fewer than in Area IV; pigmentation otherwise. 8
8. (7) Anterior parapodia with notopodial dorsal ligule significantly smaller than notopodial ventral ligule; brown band dorsally on chaetiger 2 and thinner brown transverse stripes on next 10 or so chaetigers *Ceratonereis 'multistripe_AM W.47563'*
- Anterior parapodia with notopodial dorsal ligule equal in size to notopodial ventral ligule; pigmentation otherwise 9
9. (8) Anterior dorsum with faint inter-segmental orange pigmentation on anterior segments, or pigmentation absent. *Ceratonereis tentaculata*
- Anterior dorsum with two brown bands dorsally across chaetigers 2 and 3. *Ceratonereis australis*
10. (5) Paragnaths on oral ring absent 11
- Paragnaths on oral ring present. 13
11. (10) Enlarged simple chaetae in neuropodia of posterior body; body without distinctive pigment pattern. *Simplisetia* 12
- Simple chaetae absent; distinctive striped pigment pattern *Composetia marmorata*
12. (11) Anterior parapodia with post-chaetal neuropodial lobe *Simplisetia lizardensis*

– Anterior parapodia lacking post-chaetal neuropodial lobe	<i>Simplisetia erythraeensis</i>
13. (10)Maxillary ring paragnaths conical arranged in irregular patches	16
– Maxillary ring paragnaths fine pectinae arranged in lines	<i>Platynereis</i> 14
– Maxillary ring paragnaths p-bars and arranged in regular rows	<i>Pseudonereis</i> 15
14. (13)Notopodial falcigers first present after chaetiger 12; green body	<i>Platynereis polyscalma</i>
– Notopodial falcigers first present after chaetiger 3–5; pink body	<i>Platynereis uniseris</i>
15. (13)Area II of pharynx with 11–31 paragnaths	<i>Pseudonereis anomala</i>
– Area II of pharynx with 35–52 paragnaths	<i>Pseudonereis anomalopsis</i>
16. (13)Notopodia of posterior body with homogomph falcigers	<i>Nereis</i> 17
– Notopodia of posterior body lacking falcigers	23
17. (16)Area VII–VIII with 7 or less paragnaths in one line, one size	18
– Area VII–VIII with 1–2 rows of paragnaths (10 or more), may be of two different sizes	22
18. (17)Posterior notopodia with both homogomph spinigers and falcigers	19
– Posterior notopodia with homogomph falcigers only	20
19. (18)Dark brown band on chaetiger 2 and lighter brown bands on chaetigers 5 up to 20	<i>Nereis</i> sp. cf. <i>N. trifasciata</i>
– Pigment bands absent, abundant subdermal white pigment granules over dorsum	<i>Nereis</i> 'lizard' NTM W23960'
20. (18)Dorsal notopodial lobes absent throughout; notopodial falcigers strongly bifid, with a faint third tooth proximally; irregular brown transverse stripes across anterior dorsum	<i>Nereis</i> 'carpentaria' NTM W23986'
– Dorsal notopodial lobes present anteriorly (but smaller than notopodial ventral ligule), notopodial dorsal ligule very reduced or absent posteriorly; pigmentation otherwise (usually absent or very subtle)	21
21. (20)Notopodial falcigers with smooth blades	<i>Nereis</i> sp. cf. <i>N. coutieri</i>
– Notopodial falcigers with 2 or 3 weak teeth at base of blades	<i>Nereis</i> sp. cf. <i>N. cirrisseta</i>
22. (17)Notopodial falcigers with smooth blades; two dark brown dorsal bands on chaetigers 1, light brown broken bands from chaetigers 4–10	<i>Nereis</i> 'mixed paragnaths' NTM W22634'
– Notopodial falcigers with strong lateral teeth; pigmentation largely absent	<i>Nereis lizardensis</i>
23. (16)Area VI with a single cone or small cluster of cones	<i>Neanthes</i> 24
– Area VI with 1, 2 or many bars in a line	<i>Perinereis</i> 26
24. (23)Anterior parapodia with 2 lobes	<i>Neanthes</i> sp. cf. <i>N. gisserana</i>
– Anterior parapodia with 3 lobes	25
25. (24)Oral ring of pharynx with many paragnaths several rows deep; body unpigmented	<i>Neanthes cricognatha</i>
– Oral ring of pharynx with few paragnaths; body red or orange	<i>Neanthes pachychaeta</i>
26. (23)Area VI with one bar in each Area VI	28
– Area VI with two bars in each Area VI	27
– Area VI with multiple bars (or cones) in each Area VI	32
27. (26)Jaws with teeth	<i>Perinereis singaporiensis</i>
– Jaws without teeth	<i>Perinereis vancaurica</i>
28. (26)Area VII–VIII without paragnaths	29
– Area VII–VIII with paragnaths	30
29. (28)Distinct brown bands on chaetigers 1, and 5–7, and thin stripes prostomium edge	<i>Perinereis pictilis</i>
– Tentacular and anal cirri with brown stripe, dorsum with uniform brown bands along body becoming thinner posteriorly	<i>Perinereis suluana</i>
30. (28)Bar on Area VI crescent shaped	<i>Perinereis obfuscata</i>
– Bar on Area VI straight	31
31. (30)Area I with 1 or 2 paragnaths	<i>Perinereis helleri</i>
– Area I with 4–9 paragnaths	<i>Perinereis nigropunctata</i>
32. (26)Areas VII–VIII with paragnaths (6) in arranged in a single line	<i>Perinereis</i> 'pale' NTM W22527'
– Areas VII–VIII with paragnaths (10–250) in arranged in a band	<i>Perinereis nuntia</i> species group

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